

Modern American Library Economy
As Illustrated by the Newark
N. J. Free Public Library

By John Cotton Dana

Part VII
Branches

*Section 2 The High School Branch of the
Public Library*

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NOTE

Newark now has four high schools. Three of these were completed within the last three years. No one of these three is equipped with a library. In Newark as in most cities the public and the school authorities have not yet realized that the laboratory in which are kept the most fundamental and all-pervading of educational tools—Books—and in which the wise and helpful use of those books may be taught to all pupils, is far more important than laboratories for teaching any science, or workshops for teaching the use of any tools. The principals and teachers of these new schools, however, are convinced that a library should form part of the equipment of their schools, and the school authorities will no doubt see that such are established in the near future.

J. C. D.

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High School Branch of the Newark Free Public Library

History

The High School Branch of the Newark Free Public Library, located in the Barringer High School, is an outgrowth of school society libraries. Certain teachers in the school gained the help of successive classes in collecting money for the purchase of books. Literary and dramatic societies and clubs, formed of students, gave plays and entertainments and thus secured funds with which they brought together, by 1899, about 2800 volumes.

In that year a new high school building was erected, two miles from the center of the city and a mile and a half from the new public library then nearing completion. In it was a room planned for a school library.

Mr. Frank P. Hill, at that time librarian of the public library, suggested that the collection made by societies in the school should be turned over to the library trustees on condition that they spend each year a certain sum, \$300, for the purchase of books for a new library. The following agreement was finally entered into:

"That the school authorities turn over to the public library all the books, about 2500, in the high school library, the same to remain the property of the public library, but to be kept in the high school; That these books be kept under the management of the public library; That the principal of the high school be *ex-officio* librarian of this high school branch library and receive no compensation for services unless such compensation be given by the board of education; That both old and new books be cataloged by the public library; That the library appropriate \$500 for the immediate purchase of books to be placed in the high school branch; That annually hereafter the library appropriate not less than \$300 for the purchase of books; That at the

proper time this library may be opened to the residents of the neighborhood under conditions approved by the board of education and the trustees of the library, in order that it may be in fact as well as name a branch library, the expense of which shall be borne by the board of trustees of the library; That it may be used as a delivery station by the teachers and pupils in the high school."

2751 books were turned over by the high school, and 263 were added by the public library immediately. \$498.65 was spent out of \$500, \$107.03 being paid out for rebinding 262 of the old volumes. The circulation for the first year, 1900, was 837. The circulation for 1912 was 12,341.

In the early days of the high school library the same person had charge of the free text books and of the library. The offices had little in common, and each had grown to proportions that excluded proper handling of the other when, in 1910, they were separated and given to two different persons. The free text books are administered under the exclusive control of the board of education; the library is administered under the library management, though it serves the school almost exclusively, and its librarian is paid from the educational department funds.

Description of the Room

The library is on the second floor, in a room 60' x 27'. One side of the room has seven double windows opening to the west, giving ample light and a beautiful outlook over one of the largest parks of the city.

In 1911, the library was redecorated in a soft tint of green. Carpet rugs were removed and corticine covering placed on the floor, at a cost of \$126. The former wall shelving was torn out and standard floor cases were put in; additional furniture was added and adequate lighting provided. This was done at the expense of the board of education. The room is now well equipped for library purposes.

Twenty-six tungsten burners furnish artificial light when necessary. These are hung from the ceiling on cords five feet long. There are two in each alcove between cases at the end of the room, two over each table placed lengthwise of the room, two in front of wall cases at

the north end of the room, and two in the work space above. The walls are hung with pictures, lent by the main library. Many are German lithographs. The collection is changed from time to time. A bulletin board, 3' 8" x 2' 8", made of compo board with a frame of whitewood 1 1-2 inches wide, is hung on one side of the double doorway. This is used for displaying notices and lists of special interest.

Value of a High School Library

The library should be a live factor in every high school, known and used by every teacher and student in the institution. The wares there offered should be such that no wideawake teacher can conduct his classes without using the library resources and interesting his pupils in them.

Making the Library Effective

How is this work to be accomplished? The whole solution of the problem is summed up in one word, coöperation—coöperation of librarian and teachers. This is sometimes difficult, for several reasons. There are still those among the teaching force who can not see clearly the place of a library in the educational field. Some are so absorbed in their own special field of teaching and so thoroughly satisfied with just what they have been doing along their line, that they do not care to go out of well-worn paths. There are others, and happily this is the larger number, who do realize the place and the value of a library. But some even of these feel that there is so much ground to be covered and so little time in which to do the work, that anything not actually required by the course of study will have to be excluded or their classes will not measure up to the final test at the end of the term.

The following quotation taken from a recent publication seems to show clearly the application which a library has to the work of the class room :

" The dictionary and encyclopedia are becoming live books because they help to throw light upon live questions. The real importance and meaning of culture is being appreciated because of the discovery of the bearing which the world's accumulation of knowledge has upon every day events of our own times."

Key to Room Plan

- | | |
|------------------|--------------------|
| 1 Book cases | 6 Vertical file |
| 2 Picture cases | 7 Large tables |
| 3 Lavatory | 8 Small table |
| 4 Map case | 9 Attendant's desk |
| 5 Clothes closet | 10 Catalog case |

1 These cases are of white wood, six feet long, with compo-board backs. Those standing parallel are placed in couples, back to back, with three feet four inches between the tiers.

2 Under this window are two white wood cases, 13 1-2 x 24" and 18" deep with compo-board covers on hinges. These cases are for mounted pictures. They are uniform with the cases for mounted pictures in the art department of the main library. See the Picture Collection.

4 The map case also is of uniform size 3' x 3' with that at the main library, since maps are sent to and fro as required.

5 This is a white wood wardrobe, 3' wide 10" deep and 6' 7 1-2" high.

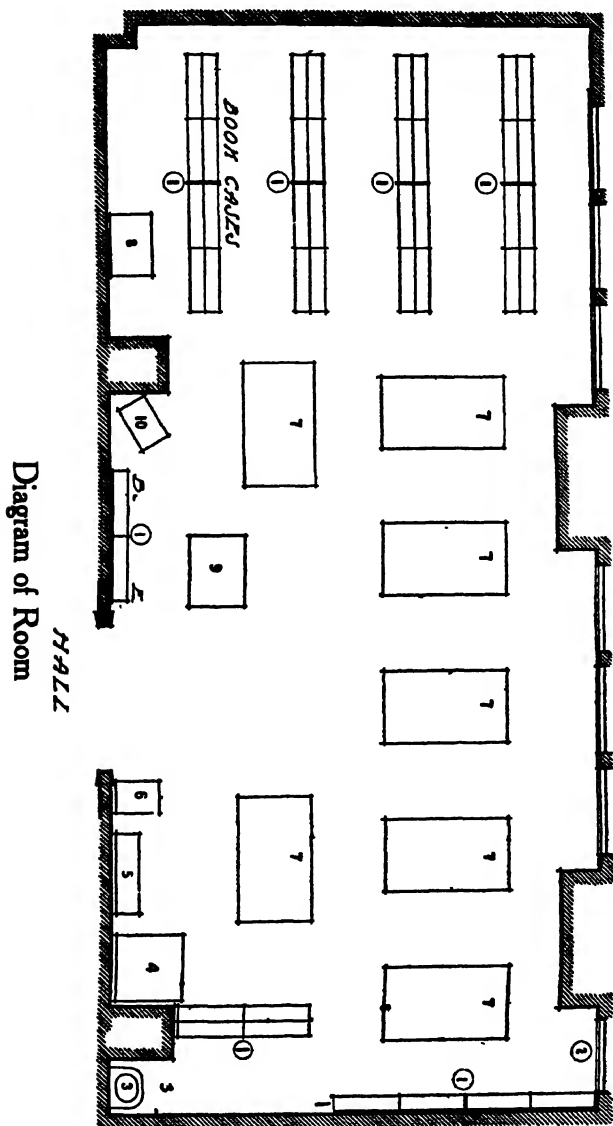
6 The vertical file is a filing cabinet of quartered oak, containing two drawers.

7 The large tables are of quartered oak, and seat eight persons each.

8 The small table is of quartered oak. It is used for the display of book lists, folders and other material intended for distribution among the students.

9 The attendant's desk controls the doorway, and commands a view of nearly all of the room.

10 The sixteen catalog cases stand on a quartered oak table.



Fortunately the ideal of the progressive teacher is to correlate her subject more and more to the affairs of today and to get beyond the two covers of the prescribed text book. When the teacher takes this attitude and librarian and teacher get each other's point of view and enter into hearty coöperation, the library should more than justify its existence. We believe this is the case with the Barringer High School.

Some of the Librarian's Duties

The librarian must do her part. Several things suggest themselves as essential in this coöperation. First, she should know the work offered by all departments of the school. This is possible through conversation with the several teachers and through outlines of courses of study. Second, she should let the teacher know what there is in the library that will be suggestive and helpful to him. Thirdly, she should abolish all unnecessary red tape so that the teacher will not feel it a laborious task to obtain the material.

Coöperation between the library and the several departments of the school depends not only on the librarian but also on the spirit of the teachers. In well organized departments the head teacher informs the librarian beforehand of topics to be discussed. The librarian then looks up material in both the branch and the main library, lists and shelves it, and notifies the teachers of the department as to what is there. If the material is scant, and there are a number of classes to use it, it is then necessary to rotate the various features of that unit of the course so that no two classes will want the same material at the same time.

The Library and the English Department

The closest coöperation is with the English department. This is largely due to the fact that the head of the department is a library enthusiast and imparts her interest to all teachers and pupils under her. It is thus possible for the librarian to give lessons on the use of the library. Each graduate of the school has received six lessons. The different English classes throughout the first three years of the course meet in the library once a term, at a regular English recitation period. The library closes for two periods each Monday when the lessons are given. The periods vary from week to week and announcement is

always made beforehand. The work is required of all students and credit is given by the English department.

This work is closely articulated with the work done by the school department of the main library, and leads directly to the lessons, given also by the school department, to the pupils of the Normal School.

The Library and Teacher of History

Most of the teachers of the history department have the idea which was expressed at a recent conference of history teachers: "History is more than mere events; it is life, and is teeming with people and their activities. Consequently a library is indispensable to a proper study of the subject."

Collateral reading is required and reports are submitted in many classes. Therefore some histories are duplicated. When a particular piece of work is to be done by the entire class, for example, a theme on the "Declaration of Independence", the instructor notifies the librarian. The best material on the subject is listed and placed on a special shelf. The material is classed as reference and circulates, for the time being, for over night only, 2.30 p. m. to 9 a. m., and reserves are made on these books. The main library also is notified and similar material is put out upon shelves in its reference room. The main library material does not circulate while it is in demand for an entire class.

The Library and Civics

Civics is studied one day out of every week in connection with history. This study is largely devoted to local affairs. With this in mind, a clipping file is kept. This is composed of pamphlets, newspaper clippings and multigraphed sheets. The material is all marked as to source and date, and is kept in manila folders. These are arranged alphabetically in a Globe filing cabinet. The Newark Evening News, the city's largest daily paper, is regularly marked and clipped for this file.

The Language Departments

The work with the language departments, Latin, Greek, French and German, consists chiefly in providing dictionaries for reference use, purchasing a very few magazines in foreign languages, and providing

some duplicates of outside required reading. Small exhibits of pictures and books are sometimes held in the library when a class is reading some particular piece of literature in French or German, for example, Joan of Arc, or William Tell.

The Science Department

A good deal of outside reading and reference work is done in the science department. With this fact in mind some books especially in demand are duplicated. Lists of books and of magazine articles on certain subjects are compiled, for example, "Food adulteration". Maps and pictures in large numbers are obtained from the main library. Such magazines as American Forestry, National Geographic Magazine, Popular Mechanics, Scientific American, Scientific American Supplement and Technical World are found helpful in arousing students' interest in science study.

The Department of Economics

The department of Economics is closely allied to the library. Lists of books and magazines are constantly made out for teachers and pupils. Files of bound periodicals, like the Atlantic Monthly, Century and Outlook, and current numbers of twenty-five of the best magazines are available. The seniors in economics are required to make an exhaustive study of some subject pertaining to the year's work. They are permitted to choose their own subject and this is to be done after the books in the library have been examined. At the conclusion of the work a long theme with bibliography is required.

The Art Department

The art department relies upon the picture collection at the main library, and the art teachers suggest books to be bought for both libraries. As the main library halls are the chief rooms for art exhibitions in Newark, the high school librarian is able, in her weekly visits, to make note of any transitory material which her intimate knowledge of the art course enables her to find useful for the art classes.

Pictures in the Library Room

An attempt is made to arouse general interest in a variety of subjects by placing small pictures on the ends of the stacks, which stand



View of the interior of the library at the Barringer High School

out in the room. Pictures pertaining to certain seasons and holidays are frequently shown. At other times an effort is made to interest the art department by exhibiting designs, or Japanese prints, or other interesting material. Or perhaps domestic science is considered and pictures of textiles or processes of weaving are hung. This bulletin, as it is called, is changed every month, and opportunity is afforded to arouse interest in a number of directions. These pictures, as well as all pictures and maps used by the high school branch, are borrowed from the art department of the main library. See Picture Collection.

Meetings and Exhibitions in the Main Library

The main library is the center of the civic life of the city. Here are held meetings on many subjects of civic, economic, aesthetic, scientific, literary and philanthropic interest. It is the business of the high school librarian to advertise these events, as well as the exhibits held at the main library, to the high school as a whole or to the department most interested, and to see that allied material is advertised for use in preparation or for follow-up work. This course is pursued also in connection with lectures or exhibitions given at the school.

Volunteer School Activities

The chief relation of the librarian to the volunteer school activities must always depend upon her personal qualities—her interest in the students and their response. Officially, she relates her work to these activities by collecting books bearing upon current student interests, and by means of her bulletin boards. Reaction in the student body is always prompt and hearty.

Use of the Library

The library is used chiefly by the faculty, numbering 57, and by the students, numbering 1400. A few people outside of the high school use the branch for reference work.

The use of the high school library for reference work by the immediate community is encouraged. The presence of adult fellow workers is stimulating to the pupils, and it is well to have intimate knowledge of school conditions widespread among adults.

The students are encouraged to draw books for the use of their families. If such requests cannot be filled from the high school library, the resources of the main library are drawn upon. At the close of the school year in June many books are issued to be kept until October 1, both for students and family use.

Hours of Opening

The library is open from 8.30 a. m. to 4.30 p. m. on school days for reading and reference work. The average daily attendance is 161.

The Library not a Study Hall

The room is in no sense a study hall; text book study is not permitted in it. During the six periods of the school day each pupil who uses the library is required to present a permit with the name, date and period signed by the teacher in charge of the study hall where he belongs at that time. The librarian in turn signs the permit and the student, when through using the library or at the end of the period, returns it to the teacher granting it.

Discipline

The high school librarian is responsible for discipline within the library room. She can, however, as can any teacher, call upon the principal for support, or refer cases to him. Every effort is made to have informal and easy discipline, subject only to the laws of courtesy. There are no silence signs about the room, and a reasonable amount of quiet communication is allowed. The janitors bear the same relation to the librarian that they do to the teachers. They clean the room and lend any assistance asked of them.

Resources: Books

The branch has a permanent collection of about 6000 volumes. The books have been selected with special reference to the courses of study pursued in the high school. They are classified and arranged according to the Dewey decimal classification. A shelf list is kept at the main library and a dictionary catalog at the branch. A list of the most extensive classes with the number of volumes in each follows:

General Works	000—544	Fine Arts	700— 84
Philosophy	100— 36	Literature	800—213
Religion	200— 80	American	810—234
Sociology	300—162	English	820—560
Political Science	320—52	German	830— 72
Political Economy	330—268	French	840— 32
Latin	340— 44	Greek	880—135
Administration	350— 57	History	900— 87
Philology	400— 79	Geography and Descrip- tion	910—231
Natural Sciences	500—141	Biography	920—102
Physics	530— 77	Ancient History	930—236
Chemistry	540— 45	Europe	940—212
Botany	580—134	North America	970—209
Zoology	590—137	Fiction	F 619
Useful Arts	600—185	Biography	B 355

Reading for Pleasure and Profit

To encourage and systematize the reading of high school students, a list of required reading called "Reading for Pleasure and Profit" was compiled in 1908 by the English instructors in the high school with the assistance of several of the staff of the public library and printed by the library in attractive form. The list has been used so extensively that in 1911 a revision was made and a third revision has just been completed and published, September, 1913. "This list has grown out of actual experience in suggesting books to young people", says the introduction. "It is not a list of the world's greatest books, but rather a list of books which the young men and women in high schools, especially Barringer High School, Newark, N. J., have found attractive and have read with pleasure and profit."

It is divided into eight parts corresponding to the eight grades of the high school course—the first and second halves of each of the four years of the course. Each of the eight parts is further divided into three parts each, namely Fiction, Non-Fiction, and Poetry. Each student is required during each semester to read at least three books, one from each of the three parts corresponding to his grade in the

school. The books in each division in a measure supplement the work pursued in that grade.

The high school branch has duplicates of all the books on this list, as have the main library and some of the other branches. In the branches, as well as in the main library, the books on the list are placed in cases by themselves. The high school branch places the books according to the grade of the list to which they belong and so marks the cases in which they are placed.

A copy of this list forms a part of this pamphlet.

Magazines

The library subscribes to the following magazines, of which the current file is always available, and those starred are bound and used constantly for reference.

Acropolis, paper

American Academy of Political and Social Science Annals, most useful in civic and economic classes

American City, used by civic classes

American Federationist, used by economic classes

American Forestry, used by some of the botany classes

American Municipalities, used by civic classes

*Atlantic Monthly, read by faculty

*Century, next to Harpers most popular monthly

Congressional Record, used in debate and current work

Current Events, read weekly by one-quarter of student body

Educational Review, used by faculty

*Harpers, most popular monthly

Independent, used by students in preparation of current event talks in English classes

Journal de l'Université des Annals, used by French classes and French club

Literary Digest, used chiefly by faculty

Municipal Journal, used by civic teachers

National Geographic Magazine, read by both students and faculty

*Outlook, read weekly by many students

Popular Mechanics, in great demand by boys



Another view of the interior of the library at the Barringer High School

Public, used by economic classes

*Readers Guide to Periodical Literature, indispensable in reference work

Review of Reviews, read by older students

School Review, used by faculty

Scientific American, popular

Scientific American Supplement, most popular magazine with the boys

*Scribner, third in popularity of monthlies

Survey, read by economic classes and faculty

Technical World, read by some boys

Twentieth Century, used only by economic classes

World's Work, most popular monthly of its kind

The most used monthly magazines are reinforced by pasting paper on the inside back and front covers and by pasting a piece of cloth down the back of the magazine. Book pocket and card are placed on the inside back cover.

Vertical File

A vertical file of newspaper clippings, pamphlets and mimeographed sheets is kept. Each of these is carefully marked as to its source, the name and date of the newspaper being given, if a clipping, and they are placed, according to subjects, in manila folders. These are made by folding a medium heavy sheet of manila paper 18 x 12 inches so that it is not quite bisected, but has a 3-4 inch heading. Upon this heading is written the subject for each folder. These folders are arranged alphabetically by subject in an ordinary vertical filing cabinet. The material is chiefly that which pertains to the government of Newark and its life, as the file, as already noted, is used largely by the history department in its course of civics.

The newspaper clipping file is managed by the high school library. This is the more easily done as current events have to be kept track of by means of the bulletin board, in response to the demands of the history and civic teachers. The cutting is done by the student assistant at noon.

Some of the subject headings are as follows :

Fire department

Government, City

Government, State

Health, Public

History, City

Industries

Libraries

Lighting

Meadow Improvement

The material in this file is for reference use only.

Sets of Single Poems

The English department long felt the need of a number of copies of certain poems which were to be used for class study. The main library had multigraphed copies of many of these poems made. These poems are filed in the library and lent in sets to the teachers. The collection is added to from time to time as need arises.

Bound pamphlets

Two years ago the head of the English department realized that *there is much valuable material in magazines not in the most accessible form and therefore not used as freely as it should be.* While it is true that this material is found by the use of magazine indexes and in bound magazines, still the indexes are difficult to use and the volumes hard to handle and the average high school student rarely borrows bound magazines.

A number of old magazines not wanted for binding were looked over and good things marked. These were then cut out and bound in boards by the library binder, at an expense of eight cents per copy. Each pamphlet was stamped and marked as a book, and classified, and a simple author, title and subject catalog was made.

One item was marked along the side of the back of each pamphlet, namely, the form of literature, whether narration, exposition or description. This was done that a number of good illustrations of such literary forms might be easily examined by students.

The pamphlets serve three purposes: First, they are valuable in reference work. It is often possible to give a student a pamphlet which

can be carried home and read when otherwise a large bound volume of a magazine would have to be used. Second, whole classes can be given examples of a certain form of literature, yet each student can have a different specimen. Third, a student can often be persuaded to read a good short story, when a book would be refused or at least not read.

The collection numbers about 325 volumes. About two-fifths of these are articles of general interest, as, for example, those on peace, on the great universities and colleges, travels, and history. Two-fifths are biographies, and the rest are good short stories. The pamphlets are arranged in order of their classification and are shelved by themselves. The collection has proven very useful.

Duplicate Collection

For the use of the teachers and their friends, the branch maintains a duplicate collection of the latest novels. This collection numbers about 40 volumes. The books are all duplicates of volumes in the main library and in other branches, but being recent publications, they are not always available there because of their popularity. A payment of one cent per day for each book in use by the borrower is required. The average amount of these payments is \$3.32 a month ; the average number of volumes drawn is 47 a month.

College Papers and Annuals

These are received from time to time as gifts and exchanges. The file is always available.

The current file of the school magazine, the "Acropolis", is kept in the library. Back files figure as school archives, and are kept in the office.

College Catalogs and High School Study Courses

A file of the latest catalogs of the best known colleges is kept. These catalogs are frequently consulted. They circulate for over night only.

Old courses of study, constituting a history of the educational progress of the school, and courses of study of other high schools are filed in the library by subject.

Programs and Examination Questions

Programs of all the entertainments given in the school are pasted in a scrap book and kept in the library.

Examination questions are filed in the school library by subject and by year.

Management

The board of education furnishes the room. The main library buys the books and periodicals, and keeps them in good condition, re-binding and repairing them when necessary.

The librarian, and teachers through the librarian, recommend books for purchase, the principal approves the recommendations, and the main library revises the lists and purchases the books. Though most of the purchases are ready about January 1, books are secured as needed at any time through the year. The mechanical preparation and cataloging are done at the main library.

So far, the high school catalog cards have been duplicates of those in the main library. These are not adequate for students' work. It is the purpose of the librarian to make fuller and much more highly specialized analyses and evaluations of the material in her library suited to the limited powers and specific requirements of the students, and thus to enlarge the catalog by an increase in both the number and the contents of the subject cards.

The Librarian

The librarian is selected by the public library and paid by the board of education. All of her time is spent at the high school branch with the exception of a few hours each week when she goes to the main library, and of a month in summer. This time she spends in furthering the interests of the branch.

The qualifications of the librarian are decided by mutual agreement between the trustees of the library and the board of education. She must be a college graduate and graduate of a library school, and must have had previous experience in high school library work.

The Librarian's Hours

The school librarian works forty hours a week throughout the year, having one month's vacation — either July or August. During the long school vacations — at Christmas, in the spring and after school closes in summer — she is in the main library. Single day holidays she takes according to the library schedule. When at the library she is assigned to some department like any assistant, thus keeping in touch with the resources and methods of the main library in all departments. Her weekly program during the school year is:

Mon. 8:30 – 12:15 and 12:45 – 4:30 at school library

Tues. 8:30 – 12:15 and 12:45 – 4:30 at school library

Wed. 8:30 – 12:15 and 12:45 – 4:30 at school library

5:00 – 6:00 at main library

Thurs. 8:30 – 12:15 and 12:45 – 5:00 at school library

Fri. 8:30 – 12:15 and 12:45 – 5:00 at school library

Assistant to the Librarian

Since there is no assistant librarian at the school, it is usually impossible for the librarian to attend either the faculty meetings at the high school or the staff meetings at the main library. This is unfortunate and makes necessary special alertness to keep in touch with the corps at both places.

The only regular help which the librarian receives is that of a high school student who has charge of the room at noon from 12:15 to 12:45. A capable and worthy student, once selected, remains in the position from year to year. She is paid seventy-five cents a week by the library. Besides her supervision of the room, she does simple clerical work, cutting, filing, etc.

Daily delivery from the Main Library

At 2:00 p. m. daily there is a delivery of books and material from the main library, filling written and telephonic requests from the high school branch, and material is sent to the main library on the return trip. Requests from the branch to the main library pass through the station department. The high school librarian selects much of the material which she wishes to borrow on her weekly trip, Wednesday

afternoon. High school teachers order material needed from the main library either directly or through the high school branch as best suits their convenience. The average number of requests sent to the main library is 66 a month. This material is the property of the branch for the time being and circulates as does regular branch property.

Repair and Binding of Books

Twice a year an assistant from the repair department of the main library comes to the high school and overhauls and relabels the books on the library shelves. In the intervals the high school librarian sends all books in need of repair to the main library, which bears all expense of their repairing and rebinding. The binding of all high school magazines, also, is done at the direction and expense of the main library. This is in addition to the \$300 spent by the main library for high school library books.

Lending Books

A student is permitted to draw as many books as needed exclusive of reference books, for a period of two weeks with the privilege of renewing. Teachers are permitted to keep books for one month with renewal privileges. Reference books go out at 2:30 p. m. and must be back by 9 a. m. the following morning. Magazines, if current numbers, circulate for 24 hours, back numbers for one week. A fine of 2 cents a day is charged for all overdue books and magazines.

In charging books, the book pocket and the book card only are used. The date of issue is stamped on the pocket and the same date and the name of the borrower and the high school room number are put upon the book card. This card is filed behind the date of issue in the charging tray.

Fine notices are sent when a book is a day overdue, a week, and two weeks. When three weeks have elapsed and the book has not been returned, the borrower is warned that a messenger will call. After that the case is turned over to the main library messenger who

calls at the house for the book and collects the fine and an additional 20 cents.

Borrowers have the privilege of placing reserves upon reference books ; they are filled in order of application.

The average daily circulation is 93 volumes.

Lessons on the Use of the Library

Through the coöperation of the English department, each class, as it passes through the school, receives one library lesson in each term during three years. The fourth year students have not, as yet, been given any lessons, although the scheme was originally made to include eight rather than six lessons.

These lessons are always given on Monday. Ample announcement is made of the hours, two forty-five minute periods on each Monday are devoted to the lessons, and the school library is closed during those periods to all other students. The class taking the library lessons meets in the library instead of going to its regular English class room.

Very soon after the opening of each term the first lesson is given to the 1B, or first term of first year, classes. When they have been served, the 1A classes are given the second lesson. And by the end of the term six lessons have been finished, each student below the graduating class having received one lesson.

All of the pupils who enter the school know the commonest uses of the dictionary, and many of them have some acquaintance with an encyclopaedia. During the winter of 1912-13 most of the 8A classes in the elementary schools took a lesson at the main library in reference book use, so that in future the high school lessons will assume an elementary knowledge of the common reference books — several encyclopaedias, *Who's Who in America*, the *Statesman's Year Book*, etc. The outline of lessons following is that hitherto employed.

The English teachers require their pupils to take notes at each lesson, prepare an outline, and present a resumé of the lesson in theme form. Hence the librarian gives the work in lecture form.

Lesson I (1 B)

Value and use of the Library

The purpose of having each class meet in the library is to introduce the students to the library and to its contents, the books. "The chief tool of education is the book." Dr. Edward Everett Hale once said: "The difference between an educated person and one not educated is that the first knows how to find what he wants and the second does not." "The largest part of every man's education is that which he gives himself."

The high school library is part of the public library; therefore it is well to consider first the library system of the city as a whole.

I The System

A Main library

- 1 History
- 2 Location
- 3 Departments

B Other branches and stations

C High school connection with main library

- 1 Books, not in branch, sent for
- 2 Books, borrowed elsewhere, returned to High school branch

II High school library

A Use

- 1 Teachers
- 2 Pupils
- 3 Public

B Hours open

- 1 Permit system during school hours

C Resources

- 1 Reference books
- 2 Circulating books

D Reference books

- 1 Definition

- 2 List of value to 1B pupils
 - a Dictionaries
 - b Encyclopaedias
 - c Books of biography
 - 1 Lippincott's pronouncing dictionary of biography and mythology
 - 2 Who's who in America
 - 3 Who's who
- E Circulating books
- F Magazines
 - 1 Rules for circulation
 - 2 Description of several
- G Clipping file
- H College catalogs, annuals and papers

Lesson 2 (1 A)

Classification and Arrangement of Books

The object of this series of lessons is to teach the resources of the library. Before this is possible two important things must be mastered—the arrangement of the books on the shelves and the meaning of the catalog.

- I Arrangement of books
 - A Logical
 - B Based on character of books
(Hence books are classified)
- II Classification
 - A Ten main classes (Decimal system)
 - B Biography
 - C Fiction

III Main classes

- 000-099 General works. Many of these treat of several subjects and cannot be placed in any one group: encyclopaedias, bound magazines, &c.
- 100-199 Philosophy : James, Psychology
- 200-299 Religion : Moulton, Modern reader's Bible
- 300-399 Sociology : Dawes, How we are governed
- 400-499 Language : Meiklejohn, English grammar
- 500-599 Science : Jackson, Electricity and magnetism
- 600-699 Useful arts : Baker, Boy's book of inventions
- 700-799 Fine arts : Tarbell, History of Greek art
- 800-899 Literature : Irving, Sketch book
- 900-999 History : Green, Short history of the English people

IV Biography

- A Designation
- B Arrangement

V Fiction

- A Arrangement by author
- B Arrangement of each author's works

VI Subdivisions of main classes

- A By tens
- Examples: 930 Ancient history
- 940 European history
- 950 Asian history
- B By units
- Examples: 973 General U. S. histories
- 974 History of Northeastern States
- 975 History of Southeastern States
- C By decimal fractional units
- Examples: 973.1 Discoveries in U. S.
- 973.2 U. S. colonies
- 973.3 The Revolution

VII Call number

A Class number

B Book number

Examples: 937 Class no.

Ab2 Book no.

VIII Shelf arrangement

A Sequence

Examples: 937 937 937 937

Ab2 Ab21 B63 B65

B Left to right

C Top to bottom

IX Problems given to class

A Printed classification slips distributed

B Location of books shown

C Each pupil given a slip from which he finds a book

D Each pupil given a book which he places on shelf

Lesson 3 (2 B)

The Catalog

I How read

II Kinds of cards

A Author card

B Title card

C Subject card

1 Usual card

2 Biography card

a Individual

b Collective

III Special cards

A Reference cards

B Pseudonym cards, &c.

1 Author

2 Editor

3 Joint author

IV Publishers' dates

V Problem slip

Example: 1 Has the library any books by Mrs. A. M. Earle? 2 If so, give titles. 3 What has the library on labor and capital? 4 Find the call number of a book entitled "Bitter cry of the children." 5 How many books on amusements has the library? 6 Write the call numbers of two. 7 Who wrote "Boyhood in Norway?" 8 Are there any other books in the library by the same name? 9 Name two books in the library by George Sand. 10 Has the library a biography of George Eliot?

Lesson 4 (2 A)**Parts of a Book****I Material****A Binding**

- 1 Material
- 2 Method
- 3 Style

B Paper

- 1 Texture
- 2 Weight
- 3 Surface
- 4 Color

C Typography

- 1 Type
 - a Size
 - b Heading
 - c Shape

- 2 Page
 - a Size
 - b Shape
 - c Margins

II Structural

- A Body of book
 - 1 Parts
 - 2 Chapters
- B Supplementary parts
 - 1 Title page, &c.
 - 2 Preface
 - 3 Aids to locating matter
 - a Table of contents
 - b Chapter headings
 - c Index

III Problems

See Course of Study for Normal School Pupils

- 1 Consult the preface of Dunn's *Community and the citizen*. How does the book differ from the usual "Civil Government"? What does the book include other than civics?
- 2 From the table of contents of Lowell's *Among my books* do you find that he has included an essay on witchcraft? If so, on what pages is it to be found?
- 3 Consult the index of Fiske's *American Revolution*. On what pages does the book treat of the Stamp Act?
- 4 Consult the index of Bryce's *American Commonwealth*. On what pages do you find a discussion of "Bosses"?
- 5 Use the index of Ginn's *Classical atlas*. From it find the location of Lemnos and express the latitude and longitude in figures (longitude east from Greenwich).
- 6 On what pages of Fiske's *History of the U. S.* do you find the longest account of the Federalist Party? Use the index.
- 7 Consult the life of Columbus by Seelye and also that by Irving. In which book could you most quickly find a reference to the Islands? Why?

- 8 Consult the introduction to Shakespeare's *Merchant of Venice* (Rolfe edition). What do you find of interest in connection with a study of the author's work?

Lesson 5 (3 B)

Periodical Indexes

- I Value
- II Most useful
 - A Poole's
 - B Readers' guide
- III How to use
 - A Backward sequence
 - B Method of making notes
- IV Problem (No definite problem is assigned after this lesson. 3B pupils are required by their teachers to write themes which necessitate a practical application of the lesson.)

Lesson 6 (3 A)

Reference Books

In investigating almost any unfamiliar subject, the most logical method is to begin with the general reference book, and work towards the special article. The wise sequence in many subjects would be: 1 Dictionary; 2 Encyclopaedia; 3 Books included in encyclopaedia bibliography; 4 Special articles in magazines. The general reference book gives the basis of knowledge, and the special article the latest knowledge.

A brief list of reference books which have been found by experience to be specially useful in connection with the high school course is here given:

I General reference

A World almanac

Gives statistics for the world up to the close of the preceding year. Election facts and figures; U. S. officials; athletic records; crop productions, &c. Index at the front.

II History

- A Larned. History for ready reference. History of all countries at all times.
Countries arranged alphabetically. Under each country, events chronological. Supplementary volumes bring material down to 1910.
- B Harper's encyclopaedia of United States history
Good short account of battles, documents, persons, etc.

III Geography

- A Lippincott's gazetteer of the world.
Alphabetically arranged. Location and description of places, with pronunciation and various spellings of names.

IV Literature

- A Harper's dictionary of classical literature and antiquities. Includes Greek and Roman art, antiquities, biography, geography, history, literature, mythology, &c. Contains illustrations and maps.
- B Warner's library of the world's best literature.
Alphabetically arranged by authors. Well illustrated. Gives biographies of noted authors and extracts from their works.
- C Granger. Index to poetry and recitations.
Main index is of titles. First line and author indexes refer to this. Appendix includes: poems on special days; charades; dialogues; drills; poems about noted people. Key to symbols in front of book.
- D Bartlett. Familiar quotations
Arrangement by authors. Subject index not full.
- E Hoyt. Cyclopaedia of practical quotations.
Arrangement by subject. Complete index.

V Debates

- A Brookings and Ringwalt. Briefs for debates.
Conduct of debate in introduction. Popular topics. References and briefs on each side of question. Briefs on public questions.

- B Matson. References to many out of the way books and old magazine articles.

VI Newark, New Jersey

- A Manual of Common Council of Newark.

Useful information about city government. Enumerates departments, officers, and duties. Some biographical sketches. List of governors of New Jersey.

- B New Jersey legislative manual.

Useful handbook of state. Contains state constitution; short histories of state institutions; a county directory; biographies of state officers; terms of office and salaries of state officials, &c.

VII The following is a sample of the kind of problem set after this lesson :

- 1 What are the duties of the governor of the Panama Canal?
- 2 Who is the author of the quotation, "Un-easy lies the head that wears a crown"?
- 3 Find a detailed account of the twelve labors of Hercules.
- 4 What was the Ku Klux Klan?
- 5 Find selections from Addison's Sir Roger de Coverly papers.
- 6 What are the duties of the city clerk of Newark?
- 7 Find five references on the "Protection and Free Trade".
- 8 Where can selections from or the whole of "Duchess of Malfi" be found?
- 9 How is the city of Chicago laid out?
- 10 What is the purpose of the Bordentown Industrial School?

Write out a complete answer to each of the above, telling all books consulted and where information was found. The complete method of the search should be made manifest in these answers.

The Elementary Lesson

The preceding outline indicates the sequence of lessons pursued through 1912-13 in the Barringer High School. During the winter the school department at the main library which has supervision of the library work in elementary, high and normal schools, as well as in the

private and parochial schools of the city, gave to most of the 8A classes of the public schools an introductory lesson on the use of reference books. This lesson is not obligatory, even in the public schools, but it was taken voluntarily by a large majority of the graduating classes, and it has been asked for by the superintendent of the Catholic schools and by the largest girls' school in the city, so that the Barringer High School lessons will be modified in the future, the high school librarian assuming that the elementary lesson or its equivalent has been received.

A detailed description of this elementary lesson is here given :

The Elementary Lesson

Preparation

Know how to arrange words in alphabetic order, and know how to read Roman numerals. This list of words is sent to each 8A teacher to be arranged in alphabetic order by her pupils before they come for the lesson.

absent	raise	slope	trill
gravity	lift	malt	applicant
lost	hire	quote	light
secretary	jet	sulphur	secrete
uplift	dissipate	kite	joke
mamma	apply	impatient	branch
horse	yoke	crag	umpire
capsule	jump	barrack	whose
ice	absence	cod	moot
money	ill	mediate	head
whom	woe	trouble	cyst
tense	one	know	huge
quack	angle	grave	guy
yolk	expand	noun	obstruct
irritate	purple	engineer	cradle
cut	plunge	bib	gray
effect	scurf	scamp	harp
fix	cake	office	lot
lady	fuss	captain	define

pinch	myrtle	lumber	invoice
person	novel	span	organ
trial	upper	invite	mammon
purport	knot	five	laugh
trot	level	dry	neck
vault	tents	medal	head

Introduction

In the first four years of a child's school life he learns how to read. In the second four years, he learns how to study a lesson, set by his teacher, in some one text book. In the third four years, he learns how to study a lesson, set by his teacher, from several, or many books. In his after life, he is supposed to know how to set for himself the questions to which he wants to find answers and how to find answers in many places.

How many of you are going next term to a high school? How many are going to work? How many are going to stay at home and be useful there?

In the high school, one of the first things that will happen to you will be the giving out by some teacher of a lesson which must be learned partly from a text book, partly from an encyclopaedia, partly from a gazetteer, partly from some collection of poems, or book of biographical sketches. The pupil who knows how to use a library will go the school library, find where the various classes of books are kept, get the books that he wants and go home happy, to learn the rest from his text book. The student who does not know how to use a library will stand about waiting for the librarian to help him out, will be fortunate if he gets one or two of the several books that he needs, and will go home discouraged because high school work is "hard."

In business, if you seem bright and intelligent, you may be asked some day for advice on some point that can only be learned by the use of library books, or you may be asked to speak at some dinner or other meeting. If you know nothing about libraries, you will be embarrassed, but if you are familiar with the library you will go there and get easily what information you need.

At home, if you are wide awake, you will be asked to join some

club, and when your turn comes to read a paper or to talk upon some subject that interests your club, you will succeed or fail according to your knowledge of how to use the library.

This juvenile room in which we meet contains many books, but most of the books belonging on its shelves are out in the homes of children who have taken them to read. They are "in circulation". *Where are the books all on the shelves in their places?* These books never go into circulation. They are kept in the room always that people may refer to them. Most of the circulating books are the sort of books that people read from beginning to end—they are read *through*. These books that stay in the room are not intended to be read from cover to cover. They are intended to be referred to when we want to know some particular facts that they contain. *What are these books which we refer to called?*

For several years you have been using one reference book. *What is the chief reference book used by all educated people?* Mention five things which the dictionary teaches us about a word.

Most eighth grade classes have a set of volumes giving information on many subjects. *What is the reference book next to the dictionary in common use?* Name one encyclopaedia with which you are familiar.

A	Ash	Bol	Car	Cod	Dem	Eve	Fla	Gla
to	to	to	to	to	to	to	to	to
Ash	Bol	Car	Cod	Dem	Eve	Fla	Gla	Hov
I	II	III	IV	V	VI	VII	VIII	IX

Hov	Kin	Mag	Mot	Pal	Pri	Sha	Tro	Vim
to	to	to	to	to	to	to	to	to
Kin	Mag	Mot	Pal	Pri	Sha	Tro	Vim	Zym
X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII

Above is shown the arrangement of the lettering on the back of a set of encyclopaedias.

Take in your hands the set of slips just given you, and see that they

are arranged in proper order. They represent the backs of a set of encyclopaedias. Find the volume containing "Fort". The volume containing "Vaccination" etc. etc. Stand if you found none of these volumes or if you need help on this point.

This reference library contains three sets of encyclopaedias — Appleton's, The International, Nelson's. You will receive a slip of paper at the top of which you will read the name of the encyclopedias from which you are to choose a volume. On this slip will be type-written a set of subjects, one of which will be checked: *Select from the shelves the proper volume of the encyclopaedia heading your slip, bring the volume to the table and find the article on the subject checked.*

Find in the International Cyclopaedia Find in Nelson's Cyclopaedia

Aquarium

Bridge

Rose

Nautilus

Weaving

Silkworm

Poster

Trogon

Dredge

Murat Halstead

Lacewing

Megalithic Monuments

Lizard

Garden City

Basket Ball

Chamonix

Europe—Peoples of

Peacock

Ice Industry

Coral Sea

Alfred University

Coaching

Libraries

Refuse Collection

Wall of China

Spaniels

Navies

Gable

Charlotte Bronte

Emen

India-rubber

Petrel

Find in Appleton's Cyclopaedia

Mistletoe

Typesetting machines

Epistle

Boulder

Grouse

Quartz

Note to the teacher. These subjects have been chosen so that one

occurs in each volume, no two in the same, and so that an interesting illustration is visible upon the pages to which each volume opens. The list must be changed from time to time, as the pages become soiled from constant use.

When you decide to buy for your home a shelf-full of reference books, you will probably buy first what? If you are limited in means, do not put a great deal of money into one immense or many volumed dictionary, but buy one middle-sized, and one or two small ones. *What will you buy next?* *What events that have happened this year will make much of the geographic information in these cyclopaedias untrue next year?* Remember, when you buy encyclopaedias, that it is best not to buy those most expensively bound because some of the information contained in them will, in a few years, be out of date.

After getting an encyclopaedia, you will next, perhaps, want this book. *Read its title.* (The teacher is then to distribute several copies of *The World Almanac*.) *What years do these volumes cover?* Each year a volume covering the events of the preceding year is published. *Look in the indexes at the beginning of these volumes, and find:*

1. British population
2. Panama Canal
3. Athletic records
4. Sovereigns of Europe
5. Conditions of woman's suffrage
6. Game laws

How many members of the class are Catholics? Episcopalians? *What is your bishop's name?* We can read his life, or the life of any prominent living man or woman of our country in this volume. *What is it called?* (The teacher is then to distribute several copies of *Who's Who in America*.) *What years do these volumes cover?*

Find the name of your bishop. What members of the class are Jews? Find the name of Rabbi Wise. Who is our librarian? Find his name. Read his biography.

Yesterday the pastor of the church on the corner came here and

asked, "Who wrote "We live in deeds, not words?" We gave him these two books. *What are their titles?* (The teacher is then to show the class *Bartlett's Familiar Quotations*; *Cyclopedia of Practical Quotations*—Hoyt.) *Find the index of each. Look for lives; deeds; words. Read the whole quotation.*

Several years from now, the mother of one of these boys may say to him, "Here is five dollars. I want you to take the young lady who has come to visit your aunt to the theatre". If you do not know how to ask a girl to go to the theatre with you, you will come to the library and read this book. *What is the title?* (The teacher is then to show the *Cyclopedia of Etiquette*.) If the girl whom you ask is young, she may not know how to answer your invitation. *How can she find out?*

(The teacher is then, in the same way, to introduce to the pupils the commonest reference books on history, fiction, poetry, plants, animals, manufactured products, games, sports, occupations, etc.)

You will now receive a typewritten slip containing several questions.

1. In what book can you find a novel written about Columbus?
2. In what book can you find a description of several varieties of aster?
3. Where can you find an account of the work of Thomas A. Edison?
4. You are going to a dinner party. Where can you learn how to behave there?
5. Where can you find out how to build a toy aeroplane?
6. In what two books can you find an account of Woman's Suffrage in 1912?
7. Where can you find an account of several kinds of moneys?
8. You want the names of several varieties of oak trees. Where can you find them?

Go to the shelves; find books containing answers to the questions:

write on a blank slip of paper the number of each question and the name of the book containing the answer. Begin with whatever question seems easiest to you, and place the numbers in any order that you please. (The teacher is to allow communication while the class is answering these questions.)

Note to the teacher. It is intended to add to this lesson an exercise upon finding books by the use of the card catalog, and to give this exercise in the branch library most accessible to the school from which the class comes. This information also will thereafter be omitted in a revised course of high school lessons.

Modern American Library Economy As Illustrated by the Newark N. J. Free Public Library

By John Cotton Dana

Volume II

Part XVII

Maps, Atlases and Geographical Publications

*Being the revision and enlargement of the second
part of the Business Branch pamphlet
published in 1910*

By Sarah B. Ball

Librarian in charge of the Business Branch

Published by
The Elm Tree Press Woodstock Vermont
1915

NOTE OF EXPLANATION

The maps, atlases and geographical publications in the Business Branch of this library have increased greatly in number since the pamphlet on that branch in this series was published five years ago. They have not only increased in number,—they have also become more varied in character, covering a wider range of subjects. Naturally, as they have thus increased they have called for the invention and construction of mechanical devices for their storage and easy handling, and for the laying out of methods for keeping records of them.

Maps have always formed a part of the acquisitions of public libraries; and in the libraries of some of our large cities there are map collections very much larger and much more elaborately disposed than is that at our Business Branch. We seem, however, to have been the first public library to make a large collection of recent maps easily accessible to the public. We have done this at both the main library and at the branch in question. These maps are roughly listed on the next page.

Our community has been very quick to take advantage of the open access to these map collections. The use made of them is very large and growing constantly. We feel sure that other libraries will be glad of an opportunity to learn, as they can in this pamphlet, something of the sources of our map supply, its character, and the manner of storing and displaying and recording it. Hence this expansion of part of an earlier pamphlet in this series.

Expense is the obstacle which keeps many public libraries from installing a workable map collection. To pay \$15 for a large local map or \$25 for a real estate atlas seems an extravagance. And yet it is possible for most libraries to economize in some detail of equipment and make a beginning. In the Business Branch alone the amount of money saved by using carpenter-built, white wood atlas

Maps at the Free Public Library and its Business Branch

Character of maps	Filing method	No. at M. L.	No. Bus. Br.	Total
Roller maps, mounted. Large and medium size. In daily use.	Platforms.	21	40	61
Roller maps, mounted. Large and medium size. Needed occasionally.	Tied up and suspended from ends of sticks.	130	16	146
All sizes. Mounted on pulp board 18 1-2" x 39 1-2".	Filed vertically in vertical map file.	175	600	775
U. S. Topographic or Road maps. Mounted on pulp board 18x22.	Filed vertically on shelves.	3800	400	4200
All sizes. County rural delivery maps. Blue prints.	Attached to metal strips and suspended in Vertical map file.		948	948
All sizes. Seldom used. Unmounted.	Folded and filed vertically in envelopes 13" x 17 1-2".			875
All sizes. Soil maps.	Folded to size of portfolios and filed in atlas case	500	500	1000
Medium and small for lending.	Mounted on pulp board and composition board depending on size and character of map.	150		150
Unmounted. In stock.		250		250
		5901	2504	8405
To this should be added about 2000 maps in Baedeker guide books, automobile guides, foreign directories, etc. which have been cataloged and made quickly available at the Business Branch.				2000
				10405
Atlases of all kinds	At M. L. 42	At Bus. Br. 25.	Total 67.	

cases, periodical cases, etc., etc., instead of the customary high grade furniture almost universally found even in the smaller public libraries, would probably cover the cost of the maps exclusive of mounting and of the cases. Economy in furniture and fittings is a rare thing in public libraries. A circulation of over 100,000 volumes can be as efficiently handled over an \$18 office desk and pine table as it can over specially designed equipment, and the saving in cost would secure a workable collection of maps that would be in daily use, or would help to make effective the hundreds of maps now lying idle and neglected in many public libraries.

To wait until a large demand for maps from the public forms a justification for the expense means indefinite postponement. A collection once begun and well displayed will rapidly increase in use. The maps at the Business Branch alone are used by 700 people a month.

A collection of maps should of course be kept up to date as far as possible, and from a file like ours, always open to the public, the out-of-date maps should be removed as soon as later ones are added.

The maps used for lending have proved very popular and the collection for this purpose is much used and is added to constantly.

The principal cost of a map collection is not the maps themselves but the labor of handling them. Of the 450 maps in the Vertical Map File, not more than 100 were bought, and even those cost only a few cents each.

The possession of a collection of maps does not of itself mean that the maps are either worth having or are being used. Unless they are arranged so that they may be quickly and easily consulted, they might almost be considered a liability rather than an asset in a public library.

The problem of arrangement and handling is complex. No one method for all maps is satisfactory for public library use. A 15" x 30" map of the Malay Peninsula and a 9' x 7' wall map of New York City cannot be handled in the same manner if the economies of time, space and labor are all to be considered.

The disposition of each map should be determined by many things,—the frequency of use, size, character, value, frequency of new editions, etc., etc.

In the Newark Library there are eight methods in use of caring for maps,—four general methods applicable to all maps, and four methods devised for special collections.

General	Special
Platform	Topographic maps
Vertical Map File	County rural delivery maps
Roller maps, not in use	Geologic portfolios
Miscellaneous old maps	Soil maps

The possession of maps should be continually advertised, of course. The new map in the window each week is one of our most effective advertisements. The large wall maps on the Map Platform advertise to all who step into the main library and Business Branch the possession of maps.

It is not too soon to say that the name of Miss Beatrice Winsor should have appeared on the title page of every one of the publications of this series. She has not only pushed forward the work on them and driven them to conclusion, she has also, in many cases, guided the copy in its creation and through the press and has read nearly all the proofs,— and much of it has been a most trying proof to read because of the countless details into which the text enters. In fact, the work would not have been possible without her aid.

J. C. D.

Maps, Atlases and Geographical Publications

United States Government and State publications are used as much as possible for this country and foreign publications for foreign countries, rather than commercial publications.

Discovering and Selecting Maps

We use the following :

For all Countries,

Guide to geographical books and appliances by H. R. Mill. Philip. 1910. 5s. One of the most useful geographical bibliographies published. Gives the publisher and price and descriptive annotations of topographical, geological, climatic, historical and school atlases ; of wall maps and maps in sheets ; of geographical pictures, globes and geographical instruments ; of publications relating to astronomical and physical geography, the geography of plants, animals and man, and a selected list of books of travel for all parts of the world. One grave fault is the absence of an index.

Bulletin of the American Geographical Society. Monthly. \$5 a year. Each number has a list of recent commercial and government publications and geographical literature. The editor, Mr. Cyrus C. Adams, has kindly offered to answer requests for information from public libraries relative to geographical publications in this country and abroad. In deciding on the comparative merits of maps, atlases, etc., such advice is of great value.

Geographical journal. Royal Geographical Society. Monthly. 27s. Each number contains a list of recent commercial and government publications and geographical literature.

Catalog of the library of the Royal Geographical Society, ed. by Dr. H. R. Mill. Royal Geographical Society. 1895. 5s.

National geographic magazine. National Geographic Society. Monthly. \$2.50.

List of geographical atlases in the Library of Congress, comp. by P. L. Phillips. 3 v. 1909, 1914.

Check list of large scale maps published by foreign governments, Great Britain excepted, in the Library of Congress, comp. by P. L. Phillips. 1904.

Catalog of typical wall maps, atlases and text books, used in European schools for geographical education; collected and exhibited by the American Geographical Society. 1908. The descriptive notes are of great value.

Petermann's Mittheilungen. Perthes. Monthly. 24 M. A journal in which the more important geographical publications of the world are listed and reviewed. Each number contains reproductions of a few maps of current interest, some of which are removed and mounted for Vertical Map File. Note of removal is made in magazine.

Geographen-Kalendar. Perthes. Annual. 6 M. A chronology of the year's explorations and geographical work and a directory of scientific and literary men who are interested in geographical work.

Bibliotheca Geographica. Gesellschaft für Erdkunde. Annual. 8 M. A bibliography of the first rank. It is easier to consult than Petermann's.

International catalogue of current scientific literature, comp. under the direction of an International Council under the auspices of the Royal Society of London. Harrison. A volume annually published for each subject or branch of science, which enumerates the recent scientific works and papers connected with that branch, the object being to acquaint persons interested in any special branch of science at the earliest possible date, with everything that is published upon that particular subject throughout the world. 17 parts. Subscription for entire set £18. The following may be of interest here:

(G) Mineralogy 16s. 6d. (H) Geology 16s. 6d. (J)
Geography 16s. 6d.

Material on geography which may be obtained free or at small

cost, comp. by M. J. Booth. American Library Association. 1914. 10c.

Wandkarten Atlanten, Bücher und Zeitschriften. Perthes. 1910.

Bibliographie géographique annuelle, par Louis Raveneau. Colin. Annual. 5 fr. A selective bibliography with critical notes.

Note also the Baedeker and Murray guide-books and a large number of other guide-books and hand-books issued by commercial houses; municipal, state and government authorities; railroads, newspapers, boards of trade and commercial organizations, and other associations and institutions covering cities, states, countries and localities in all parts of the world; also the maps in government publications relating to river surveys, soil surveys and reclamation projects, the maps of foreign countries, historical maps, etc.

For American Publications,

Catalog of copyright entries. Part 1, Group 2. Library of Congress. Monthly. The only publication in which all commercial, insurance, blue print and directory maps are listed. Is checked up regularly for new publications.

Price list 53. Superintendent of Documents. Contains information about maps issued by the various departments of the United States government.

Monthly catalog, United States public documents. Superintendent of Documents.

Topographic maps and folios and geologic folios published by the U. S. Geological Survey. Latest edition. The topographic sheets are here listed alphabetically by states and under the state by the name of the quadrangle. The geologic folios are listed both numerically and by states.

List of publications of the U. S. Geological Survey, not including topographic maps. Latest edition. Arranged chronologically under headings: bulletins, monographs, etc.

Catalog and index of the publications of the U. S. Geological Survey. 1880-1901, by P. C. Warman. U. S. Geological Survey. Bul. 177. 1901.

Catalog and index of the publications of the U. S. Geological Survey. 1901-1903, by P. C. Warman. U. S. Geological Survey. Bul. 215. 1903. This and the preceding publication form a complete dictionary catalog of all the publications of the Survey from its foundation to 1903.

Catalog and index of contributions to North American geology, 1732-1891, by N. H. Darton. U. S. Geological Survey. Bul. 127. 1896.

Bibliography and index of North American geology, paleontology, petrology and mineralogy for the years 1892-1900 inclusive, by F. B. Weeks. U. S. Geological Survey. Bul. 188 and 189. 1902.

Same, for the years 1901-1913. U. S. Geological Survey. Bul. 301, 372, 409, 444, 495, 524, 545 and 584. 1906-1914. Since 1908 it has appeared annually.

Soil maps have been published by the Bureau of Soils, Department of Agriculture, for over 500 counties or areas in the United States. See Price List 46. Issued by Superintendent of Documents.

Catalog of geological maps of America, North and South, 1752-1881, in geographic and chronologic order by Jules Marcou and J. B. Marcou. U. S. Geological Survey. Bul. 7. 1884.

List and catalog of the publications issued by the U. S. Coast and Geodetic Survey. 1816-1908. 1908.

Catalog of charts, coast pilots, and tide tables. U. S. Coast and Geodetic Survey. Latest edition.

Catalog of charts, plans, sailing directions and other publications. Hydrographic Office. Latest edition. The Hydrographic Office issues charts of all parts of the world except the coast of the United States the charting of which is left to the Coast and Geodetic Survey.

Survey of northern and northwestern lakes. U. S. Lake Survey Office. In addition to small charts covering the entire lakes in detail there is one general chart which covers the entire lakes; also a single chart for each of the five great lakes. Prices range from 6c to 20c each.

List of maps of America in the Library of Congress, comp. by P. L. Phillips. 1901.

The Lowery collection; a descriptive list of maps of the Spanish possessions within the present limits of the United States 1502-1820, by Woodbury Lowery. Library of Congress. 1912.

Kohl collection of maps relating to America by Justin Winsor. Library of Congress. 1904.

Alaska and the northwest part of North America 1588-1898; maps in the Library of Congress, by P. L. Phillips. 1898.

Catalogue of publications of the Geological Survey, Canada, Department of Mines, Geological Survey Branch. 1909.

Supplementary list of publications of the Geological Survey, Canada, Department of Mines, Geological Survey Branch. 1912.

For State Publications,

Monthly list of state publications. Library of Congress. The only publication in which state material is listed. Is checked up regularly for new publications.

State geological surveys of the United States. U. S. Geological Survey. Bul. 465. 1911. Contains brief résumé of previous geological surveys, also plan and scope of present geological surveys with summary of laws, appropriations, publications; and indicates independent and coöperative investigations.

Index of economic material in documents of the states of the United States, comp. by A. R. Hasse. Carnegie Institution of Washington. 1907-1912. Maine, 75c; New Hampshire, 50c; Vermont, 50c; Massachusetts, \$2.25; Rhode Island, 75c; New York, \$3.75; California, \$2.25; Illinois, \$5; Kentucky, \$5; Delaware, \$1.50; Ohio, \$14.

A provisional list of the official publications of the several states of the United States from their organization, comp. by R. R. Bowker. 4v. Publishers Weekly. 1899-1908. \$10.

Summary of the work of the Geological Survey of New Jersey, with a subject index to its reports by H. B. Kümmel. Geological Survey of N. J. 1903.

List of publications of New Jersey Geological Survey since its inception in 1864. Annual administration report of the state geologist for the year 1913. Geological Survey of N. J. Bul. 12. 1914.

For English Publications,

Catalogue of maps, atlases and books issued and sold by Edward Stanford. A large variety of maps covering all parts of the world. Stanford is the authorized agent for the English Ordnance Survey.

Illustrated guide to George Philip & Sons, geographical and educational maps. A useful catalog of inexpensive maps intended primarily for school use.

Catalogue of Bacon's maps, atlases and globes.

Catalogue of the 6" and 25" county maps and town plans of England and Wales and the Isle of Man and of the 1" and smaller scale maps and other publications of the Ordnance Survey of the United Kingdom. Darling.

Catalogue of admiralty charts, plans and sailing directions; pub. by order of the Lords Commissioners of the Admiralty. Darling. The agent for British Admiralty publications in the United States is John Bliss & Co., 128 Front St., New York City.

Catalogs of the following firms: Bartholomew and Johnston.

For German Publications,

Perthes. Considered the leading map house of the world. Other publishers of note are Wagner & Debes, Velhagen & Klasing, Reimer.

Note the *Bibliotheca Pedagogica*. Issued by an association of publishers. Annual. 50c. May be secured through Stechert or any other importing agent. The publications of the best German map houses are listed in it.

For French Publications,

Catalogs of the following firms: Hachette, Delagrave and Colin.

For South America,

List of publications published and distributed by the Pan American Union. 1914. Includes maps of Bolivia, Central America, Chili, Cuba, Guatemala and Mexico, which vary in price from 25c to \$1.50.

List of maps of America in the Library of Congress, comp. by P. L. Phillips, 1901.

For Maps of Continents,

In selecting maps of foreign countries the following sets are recommended from which to choose :

Stanford's library maps. Size 65" x 58". Price mounted, 45s. each. 13 maps, including the world, continents, British Isles and British colonies.

Stanford's large series of school maps. Size 50" x 58". Price, mounted, 13s. each. 21 maps including the world, hemispheres, United States and British colonies.

Stanford's new series of orographical school maps. Size about 50" x 60". Price, mounted, 20s. each. Six maps including the continents and the British Isles.

Johnston's imperial series of school wall maps. Size 72" x 63". Price, mounted, 19s. each. 18 maps including the world, hemispheres, continents, United States and British colonies.

Johnston's series of large school wall maps. Size 50" x 42". Price, mounted, 12s. each. 39 maps including the world, hemispheres, continents, principal European countries, United States and English colonies.

Philip's comparative series of large schoolroom maps. Size varies from 72" x 48" to 80" x 63". Price, mounted, varies from 14s. to 18s. each. 17 maps including the world, hemispheres, continents and English colonies.

Philip's large political and commercial schoolroom maps. Size 68" x 54". Price, mounted, 14s. each. 18 maps including the world, continents, United States and English colonies.

Rand McNally Columbia series wall maps. Size 66" x 46" and 46" x 66". Price, mounted, \$7 each. 9 maps including the world, continents, United States, British Isles and Germany.

Separate maps from Stieler's Atlas of modern geography. Published by Justus Perthes. Various sizes. Prices vary from 3s. to 8s. each, mounted. Index, 1s. 6d. extra. 12 maps including South America, United States and the principal European countries.

Kiepert's political and physical wall maps. (German text). Published by Dietrich Reimer. Size varies from 44" x 56" to

81" x 67". Price, mounted, varies from 11M to 22M. 38 maps including the continents, hemispheres and European countries.

Sydow-Habenicht physical wall maps. (German text). Published by Justus Perthes. Size varies from 59" x 67" to 80" x 66". Price, mounted, varies from 18M to 21M. 17 maps including the world, hemispheres, continents and principal European countries.

Debes' physical and political wall maps. (German text). Various sizes. Price, mounted, varies from 10M to 19M. 14 maps including the world, hemispheres, continents and Germany.

Ordering Maps

American publications are ordered through their publishers.

Foreign publications are imported through Stechert and other importers. American agents for foreign publications usually charge duty.

Map Rotomatic

The rotomatic is an Irving-Pitt ring book No. 721 and costs \$3.30. There are other makes on the market. The canvas cover is reinforced with pigskin back and corners in the library bindery. One rotomatic holds 400 sheets. The sheets cost \$3 for 500.

A loose-leaf record is made for all roller maps and maps in Vertical Map File on sheets of ruled paper 8 1/2" x 11". On each sheet is recorded the publisher, place, date of publication, date received, size, scale, price or source, price of mounting (for roller maps only), by whom mounted and any other notes that may be needed. On the reverse of the sheet are listed the analytical catalog cards that have been made for each map. See under Cataloging. A sheet is also made for each atlas, directory or reference book in which maps occur, for which card analyticals have been made. The entry contains only the title, publisher, place and date of the atlas or book. The analyticals are listed on the reverse side of the sheet. The classification numbers of the maps and the call numbers of the atlases and books are written in the right upper corner of each rotomatic sheet. The sheets are arranged first by classification number and second by the subject of the map or the author number of the atlas or book. The value of the rotomatic record is, first, as a classed index bringing together all maps

geographically related; second, as a record of cost, size, scale, etc.; third, as a record of catalog analyticals so that cards may be removed from the catalog if a map or atlas is withdrawn. See Fig 1.

Pub. by U. S. Geological Survey	517.7432
○ Topographic atlas of U. S. Sheets no. 21-23	U. S. Northern Map platform
Purchased from U. S. Geological Survey. Trenton. 9 sheets, 25c. each	Scale 1 mi. to 1 in.
	\$2.25
Mounted by A. Rudolph	Size 37" x 76 1/2"
+8 sq. ft. at 6c.	2.88
Extension 18 sq. ft. at 5c.	.90
Sticks 12 ft. at 1 1/2 c	.18
	3.96
○ Postage 14c by purchase 25c	.39
Total cost	\$ 6 60
Dates of publication	
Sheet no. 21	1906
" 22-23	1910
" 24-26	1912
" 27	1903
" 28	1912
" 29	1910
○ (Card catalog analyticals listed on reverse of this sheet)	

Fig 1. Map Rotomatic, leaf of loose leaf ledger, on which records of maps are made. Reduced; actual size, 8" x 11".

Classification of Maps

Each map is classified by the Dewey Decimal system under the class of Travel, using four decimal figures when necessary. The classification number is written on the reverse side in the center of all roller maps and in the upper right corner of maps in the Vertical Map File.

Cataloging Atlases and Maps

Cards for maps and atlases are filed in the general catalog at the Branch.

Atlases. Full author and subject cards are made and brief analyticals for local material or anything of special interest. General atlases are entered under the heading "Atlases". Local atlases are entered under the name of the locality followed by the word "Atlases".

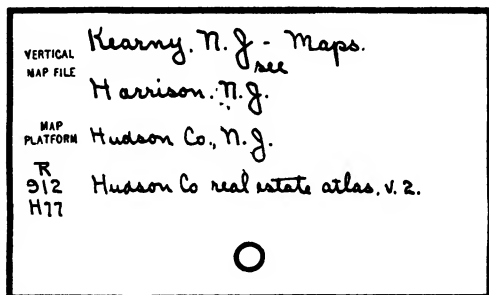


Fig 2. Analytic card indicating where three different maps are filed.

Maps. Subject cards and analyticals are made containing the names of the cities or geographical division which the map covers followed by the sub-head maps and nothing more. In the left upper corner is indicated, with a rubber stamp where the map is kept, i. e. Platform, Vertical Map File, etc. See Fig. 2.

Geologic Atlas of the United States. Library of Congress cards are used. Subject cards alone are made and the entry is under the name of the state followed by name of the folio. See Fig. 7.

Maps in atlases and books. Card analyticals are made for those maps of special interest which are found in guide-books, reference books, atlases, reports, etc. These cards have for subject-headings the names of the cities or geographical divisions which the maps cover, with a reference to the titles of the books in which they are found, and nothing more. See Fig. 6. A record of the analyticals is made in the Map Rotomatic, which see.

Arrangement of Atlases and Maps^{*} Atlases

Atlases are filed in white-wood cases of the following dimensions: 5' high 2' 6" wide and 2' 1 1-2" deep. Each case has 10 shelves. Space between shelves 4". Height of base 12 1-2". Back is made of compo board with a wooden molding 7-8" around the edges. The edges of the shelves are rounded off to reduce wear on the bindings

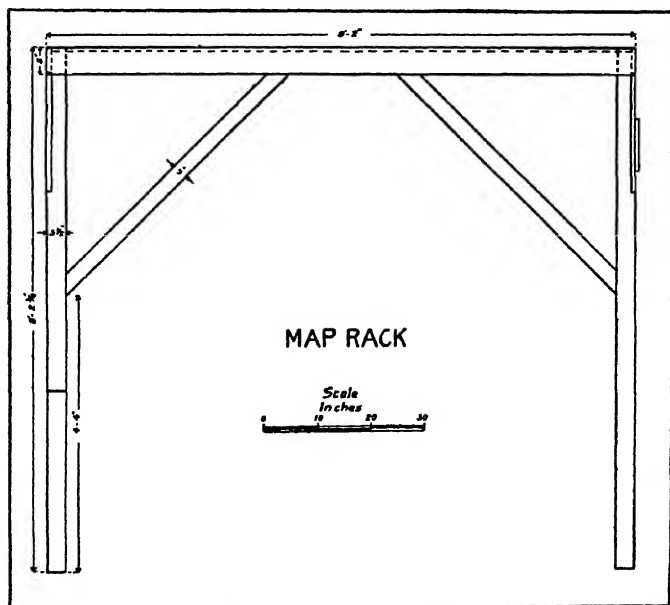


Fig 3. Front elevation of map platform

of the atlases. The atlas cases are made by a carpenter and cost \$15. A typewritten list of the atlases with descriptive notes is mounted on a heavy piece of card-board and placed on the top of the case that people may help themselves more readily.

Geologic Atlas of the United States

The geologic atlas folios are arranged as follows: Four or five folios, depending on thickness, are placed in a Rugby brown wrapping paper envelope, made to order by local firm at a cost \$3 for 50

envelopes. These are then filed vertically in two rows side by side in a standard Vertical Map File, described elsewhere. The only variation in the Vertical Map File is a change in depth from 2' 5" to 1' 11". Half of a standard size Vertical Map File will hold the folios to date.

The folios are arranged by their serial numbers. To obtain the folio wanted either the card catalog, the Catalog of the Geological

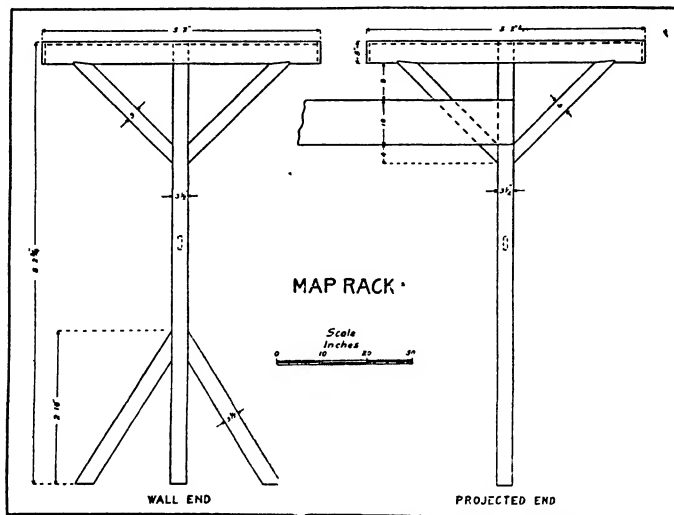


Fig 4. Side elevation of map platform

Survey, or the key maps of the Topographic Maps, must first be consulted and the serial number secured. A numerical list is also printed on the back of each folio. See under Cataloging Atlases and Maps.

Platform for Maps on Rollers

Two platforms or stages, each 5' 2" by 9' 2" were built with substantial frame and cross pieces of 2 x 4s. These were covered on the under side with tongued and grooved cypress, 7-8" thick. These platforms are supported at a height of 8' from the floor and parallel to it, by posts 3 1-2" square placed at the centers of the ends. Braces 3" x 7-8" run from the posts at a height of 6' 3 1-2" from the floor to within 7" of the edges of the platforms. Diagonal braces run from the inside of the posts, at a height of 4' 4" from the floor, to within 1' 5"

of the centers of the platforms. The platforms stand parallel to each other, 4' apart, and at right angles to the side wall of the room. The posts nearest the wall have 3 1-2" braces, beginning 2' 10" from the floor and fastened to the floor 1' 9" from the post. A brace 10" x 7-8" connects the two platforms at the ends which project into the room. It is attached to the posts 1' 11" from the top of the platforms. Natural light is provided by double windows between the platforms and on their outer sides. Artificial lighting is provided by eight 40 watt tungsten lamps, with reflectors, which are attached to the four sides of the platforms—two on each side. The cost of each platform is \$15. See Fig. 3 and 4.

To the under side of these platforms are fastened ordinary shade-roller brackets, of such size and at such distance apart as to accommodate about 50 maps. These maps range in width from 27" to 118". Two maps that are too large for the platform are fastened to 2 1-2" x 3" beams that project 11 1-2" beyond the ends and at the edge of each of the platforms. The rollers are of tin and are of two kinds, the difference being in the manner in which maps are attached to them.

The later and better style is known as the "new groove". The prices are the same for both styles. 2' long, 35c.; 4', 60c.; 6' \$1.30; 8', \$1.50.

The maps are mounted on muslin by M. A. Rudolph, 401 1-2 East 144th St., New York City, at a cost of 6c. per square foot.

From the top of each map an extension of the material on which the map is mounted projects 3'.

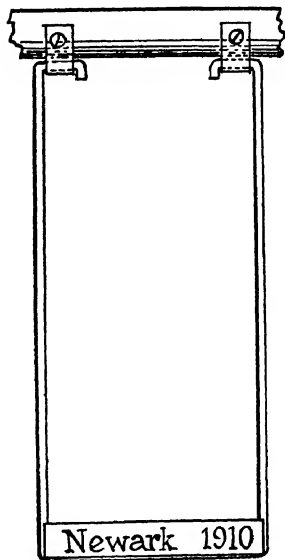


Fig 5. Pull and label attached to maps on platform.

The cost of the extension is 5c. per square foot. The upper edge of this extension of the mount is attached to the roller. If a map is then pulled down until this extension is all unrolled the top of the map is just about on a level with the eyes of a person of average height. The usual two half-round sticks are attached to the bottom of each map. Price, 1 1-2c. per lineal foot.

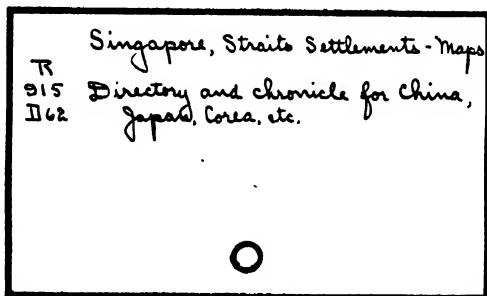


Fig 6. Analytic card for map in Directory

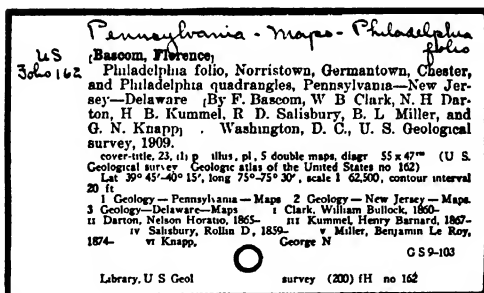


Fig 7. One of three cards for folio of U. S. Geological Atlas. Similar cards made for Delaware and New Jersey.

To mark the maps when rolled up so that an inquirer can select readily the one he wishes to see a label is attached to each in this way:—

A Sherardized wire, 1-8" in diameter, is bent to form a square-based U, with uprights 14" long, and bottom 6" wide. The ends of the arms are bent in at right angles 1-2" and are fastened to the sticks at

the bottoms of the maps by short strips of brass 1-2" wide bent around both wire and stick with screws through its ends into the sticks. In the bottom of the U is laid a block, 6" long and 1" square, grooved at the ends. Staples driven into it over the wire hold it in place. On one side of the stick is pasted a label bearing in plain letters the name of the map to which all is attached. See Fig. 5. The whole makes a convenient handle for drawing the map down. The labels are large and legible and easily renewed or changed. The handles are not large enough or low enough to cast unpleasant shadows on a map on the back part of the platform when it is drawn down.

A list or chart to show the location of the maps on the platforms is hung near the platforms.

Before we adopted this method of hanging large maps or small maps subject to much use, we examined all the other methods we could learn of. This seemed the simplest and most convenient of them all.

Vertical Map File

All small maps of temporary interest or value or maps that are used too seldom to warrant the expense of mounting, are arranged in the following manner :

Sheets of No. 30 pulp board, 27 1-2" x 39 1-2", are trimmed to size 27" x 38". No. 30 means that 30 sheets of this weight make 50 pounds. The price is 4c per pound, \$2 a bundle, or from \$55 to \$60 per ton. Purchased from Henry Lindenmeyr & Sons, Newark and New York.

One map is mounted on each board. One edge of the map is placed 1" from a long side of the board and there held by a 1" strip of bond paper pasted down over its entire length. If the map is smaller than the board, its lower edge is held down by pasting a 1" strip of bond paper over its entire length. If the map is larger than the board its edges are folded as need be ; it is then attached to the pulp board by bond paper over the fold, the fold being placed an inch from the edges of the board, and bond paper is pasted along the upper edge.

These boards are filed in a Vertical Map File, 3' 4" wide and 2' 5" deep, inside measurement, like cards in a catalog. The name

and character of each map are written on the edge of each board above the bond paper strip. Colored bands of various colors are placed across the top of the boards as a guide to keep the boards in alphabetical order. For description of colored band filing method see Business Branch Pamphlet. The Vertical Map File is made of 7-8" cypress and runs on casters. Vertical partitions every 6" keep the boards upright. The cover is made of compo board covered with Rugby brown wrapping paper and is hinged on. This Vertical Map File will hold 150 maps 27" x 38". They catalog themselves and can be easily removed for examination.

The Vertical Map Files are made by a carpenter and cost \$25 each.

Topographic Maps of the U. S. Geological Survey

The sheets are arranged by states and under the several states alphabetically by the names of the quadrangle. Some of the sheets cover parts of more than one state. Of these additional copies are bought, and one copy is placed alphabetically with those of each of the several states which it may touch. The name of the state, with which each of these maps is to stand, is underscored, to insure correct refiling.

The sheets are mounted on pulpboard and filed vertically on shelves divided into small compartments, 3" wide by 19" deep by 24" high.

Sheets of No. 35 pulp board, 27 1-2" x 39 1-2" are trimmed to size 18" x 22". No. 35 means that 35 sheets of this weight make 50 pounds. The price is 4c. per pound, \$2 a bundle, or from \$55 to \$60 per ton. The sheets are not pasted down, but are attached to the mounts by strips of paper 1-2" wide pasted over the top and left edges of the map and a short 4" strip pasted over the lower right edge. Special sheets and large scale maps are folded to the size of the mount and attached by a cloth hinge at the left side. No title is written on the mount.

The U. S. Geological Survey publishes occasionally index maps of the several states for which sheets have been issued. These index maps show the progress of the survey and of the publication of sheets in each state. They vary in size and usually include several

states. For instance, the New England states are included on one sheet. Each index map, there are now 17, is mounted on a 22" x 18" pulp board and numbered from 1-17. The mounted sheets are placed in numerical order in a separate section of the map case. On an alphabetical list of states, each state name is followed by the number of the index map on which that state's map is mounted. To find the index map of a state the alphabetical list is consulted and from this the number of the desired sheet is found.

Maps received after the publication of the index map, which should include them, are indicated on the index maps by outlining thereon the several squares they cover.

Topographic Map Case

Two wooden cases placed back to back form a double case 6' high, 9' 4" long, 3' 1 1-2" wide. On both faces of it are three shelves, the first on top of a 12" base, the second 2' 2" above the first, the third 2' 2" above the second, leaving 5" space at the top for temporary storing of used maps. Shelves one and two are divided into small compartments described on the preceding page. There are 27 compartments on each shelf, or a total of 108 divisions. At present 83 of them are filled with topographic maps.

In order to insure proper order of maps for which there is constant demand it has been found necessary to lock the case.

Across the full length and at the top of each of these two map sections a board 6" wide 3-4" thick is attached by hinges. When maps are not in use the board is locked to a center 1-2" upright. When maps are consulted the board is unlocked, raised and held in place by a hook. This hook hangs on the side of the case and fastens into a screw on the end of the board.

Map File for Rural Delivery County Maps

The rural delivery county maps are filed in a case differing in the following manner from the standard Vertical Map File described on p. 15.

It is 2' 8" long, 3' 7" wide and 3' deep. The sides and partitions are made of compo board with a white wood frame 3" x 1". Along the top of the sides a brass strip 1" wide is placed as a protection

against the wear of the rods which rest upon them. These files are made by a carpenter and cost \$12 each.

For this set of 924 maps a modification of the Vertical Map File mounting system is in use which reduces the space required for storing without losing the advantage of vertical filing. It is as follows: A piece of thin sheet metal, 40" x 3", is folded over a steel rod, 1-16". Between the edges of the metal fold is inserted a 4" piece of unbleached muslin. Two raw edges of the muslin project 1" from the edge of the metal fold. To the edge of the muslin the map is pasted. If the map is larger than the File, the map is folded as need be and then attached to the muslin at the fold. The projecting ends of the rods rest on the sides of the File and the maps are thus suspended in the File. Two maps are suspended from each rod, each map being attached to a separate muslin strip. After the muslin is in place the rod is inserted and then the edges of the metal fold are hammered together at the ends and in the middle, thus keeping the muslin in position.

With two maps on each rod the space occupied by the maps is about equal to the rod, so that the space required by this system is very nearly the minimum for vertical filing. The entire collection of 924 maps occupies about 9' of space. As it is quite feasible to put four maps on each rod, except when they are very large, this collection may grow to 2000 maps before additional cases are required. This method is, however, only suitable for maps that are printed on paper as heavy as blue print paper. For all other sheet maps, the method of mounting on pulp board, described on p. 15, is recommended.

The maps are arranged in the File alphabetically by states, and under each state alphabetically by counties. A modification of the colored band system is used to keep them in order. The Official Postal Guide is used as a guide in finding a map when the county is not known.

Soil Maps

Over 500 maps of counties or areas have been published in the reports of Field Operations, Bureau of Soils, Department of Agriculture. These maps have been removed from the cases in which they

are issued and laid flat in portfolios. The portfolios are made of boards covered with Rugby brown paper and cloth back. They cost 50c. each. The maps that are larger than the portfolios are folded as need be and a strip of bond paper pasted over the fold. The maps are arranged alphabetically by states and under each state alphabetically by the name of the county or area. The relative demand for these maps does not at present warrant either the space or the cost required for the Vertical Map File method described on p. 15. The method in use is economical, it eliminates or reduces the folds in the maps, thus preserving them; it brings together the maps of a given region and their removal from the document collection to the map collection advertises the collection and results in increased use.

Roller Maps not in Use

The older and less used maps are rolled around the bottom stick, tied with tape, and numbered. A screw eye is fastened into one end of the stick by which the map is suspended from a screw-hook in an overhead platform. In this library it is in the stack building.

The overhead platform is of white wood 1' 2" wide, built into the ceiling, which is 7' 3" from the floor of the stack. Into this wood screw-hooks are placed about 4" apart. From these hooks maps are hung in numerical order. The numbers and descriptive labels are placed at uniform distance of 2' 6" from the overhead platform.

Miscellaneous Unmounted and Uncataloged Maps

Hundreds of maps are collected from directories, from books, by purchase, and by gift. After a time these are only occasionally consulted and are replaced by more recent ones, but they must still be accessible.

Envelopes are made of Rugby brown wrapping paper, size 13" x 17 1-2" with a flap 6 1-2" wide.

Maps are folded to fit with the name on the outside fold and are then put in the envelopes. All maps of a place or locality are together irrespective of scale or date. Titles of the maps in the envelopes are written on the upper right corner of the flap. "See "

references are made on sheets of paper of corresponding size. Envelopes are filed alphabetically in wooden boxes 1' 11 3-4" x 1' 2 5-8" x 1' 6 3-8". Made by a carpenter, price \$2 each. See Picture Collection.

Some of the Most Useful General Atlases, Gazetteers and Geographical Publications

This list is necessarily brief. For fuller information the reader is referred to Mill's Guide to Geographical Books and Appliances and the other bibliographies listed on pages 1 — 8.

Atlases

Atlas of modern geography by Adolph Stieler; adapted for the English speaking public by B. V. Darbishire. Ed 9. Perthes. 1908. 26s. This atlas is used for foreign countries in preference to American publications. It is the best and cheapest atlas in existence, noted for its accuracy, amount of detail and fine workmanship.

The Times atlas by R. Andree. London Times. 24s to 50s. 1901. A cheap and good reference atlas.

Twentieth century citizen's atlas by J. G. Bartholomew. Newnes. 1908. 21s. The best English reference atlas at the price.

Royal atlas of modern geography, Johnston. 1902. 126s. This was once the standard atlas of its day.

Victoria Regina atlas. Johnston. 1902. A new edition in preparation.

Grosser Hand Atlas by H. Kiepert. Reimer. 1908. 40M. An excellent and reliable German atlas.

Philip's new handy general atlas of the world. Philip. n. d. 21s. A useful reference atlas.

Atlas of universal geography. Folio ed. Stanford. 1904. £12. The most expensive atlas with maps of varying value. This is also published in quarto and octavo editions at 25s. Owing to the fact that the maps are sold separately, it becomes possible during the course of an edition to insert reprints of some of the maps, with corrections, which are of later date than the title page of the volume.

Atlas général Vidal-Lablache. Colin. 1909. 30fr. Among the best atlases for general use.

Atlas universelle de géographie. By Vivien de Saint Martin and Schrader. Hachette. Not yet completed. The plates are issued at irregular intervals. Each plate 2 fr. The most detailed French atlas.

Berghaus' Physikalischer Atlas. Perthes. n. d. 7v. 82M. v. 1 Geologie 18.40M. v. 2 Hydrographie 14.80M. v. 3 Meteorologie 16M. v. 4 Erdmagnetismus. 7.60M. v. 5 Pflanzenverbreitung 11.20M. v. 6 Tierverbreitung 12.40M. v. 7 Völkerkunde 19.60M. The finest complete physical atlas published.

Rand-McNally's atlas of the world. 2v. Rand-McNally. 1912. \$25. To increase the use of the government and state publications each map in the United States section is stamped "For maps on larger scale ask to see U. S. and State Surveys. The maps of foreign countries are stamped "For maps on larger scale consult Stieler's Atlas of Modern Geography."

Philip's mercantile marine atlas of the world. Philip. 1914. 63s. Specially designed for merchant shippers, exporters, and ocean travelers and for general use. Gives distances between ports, length of time for steamers carrying mail, British and U. S. consulates and plans of the harbors of the world.

Atlas of the world's commerce, comp. and ed. by J. G. Bartholomew, Newnes. 1907. 21s. Descriptive text and diagrams showing products, imports, exports, commercial conditions and economic statistics of the countries of the world.

Atlas of meteorology. Bartholomew. n. d. 52s 6d. Shows the weather and climate of the world.

Atlas of foreign countries; a companion volume to Commercial atlas of America. Rand-McNally. 1913. \$15.

Commercial atlas of America. Rand-McNally. Published annually. \$15. The most useful American atlas for general use.

Geologic atlas of the United States. U. S. Geological Survey. 25c. a folio, a few folios 50c. Includes 194 folios to date.

Atlas of the Philippine Islands. U. S. Coast and Geodetic Survey. Special Publication No. 3. 1900. Contains geological, ethnographical, topographical and physical maps. Well indexed.

Survey atlas of England and Wales. Bartholomew. n. d. 40s. The best reference atlas for England and Wales.

British Empire and Japan; a modern atlas having 213 maps, by W. Bisiker. Geographical Publishing Co. 1909. 16s. to 21s.

Atlas of Canada. Department of the Interior. 1907. 22s. 6d.

Karte des Deutschen Reiches by C. Vogel. Perthes. 12-49M.

Atlas of India; being v. 26 of the Imperial gazetteer of India. Clarendon Press. 1909. 15s.

Gazetteers and Geographical Publications

Nouveau dictionnaire de géographie universelle by Vivien de Saint-Martin and Rousselet. Hachette. 1879-95. 8v. 250fr. Supplement. 1900. 2v. 44fr. The most thorough gazetteer in existence.

Longmans' gazetteer of the world, ed. by G. G. Chisholm. Longmans. 1902. 21s.

The Times gazetteer of the world by G. G. Chisholm. London Times. 1899. 17s. 6d to 24s. Although out of date in statistics and minor matters, this is still the most satisfactory gazetteer in English.

Lippincott's new gazetteer, ed. by Angelo and Louis Heilprin. Lippincott. 1911. \$10.

Cassell's gazetteer of Great Britain and Ireland. Cassell. 1893-97. 6v. 30s. The largest gazetteer of the British Isles.

Survey gazetteer of the British Isles, topographical, statistical and commercial, comp. from 1911 census; ed. by J. G. Bartholomew. Edinburgh Geographical Institute. 1914. 15s.

Lovell's gazetteer of the Dominion of Canada. Lovell. 1908. \$5.

Pronouncing gazetteer and geographical dictionary of the Philippine Islands. U. S. Bureau of Insular Affairs. 1902.

Geographical dictionaries and gazetteers have been published by the U. S. Geological Survey for the following states and territories :

Alaska	Bul. 299	1906	Massachusetts	Bul. 116	1894
Colorado	Bul. 291	1906	New Jersey	Bul. 118	1894
Connecticut	Bul. 117	1894	Porto Rico	Bul. 183	1901
Cuba	Bul. 192	1902	Rhode Island	Bul. 115	1894
Delaware	Bul. 230	1904	Texas	Bul. 224	1904
Indian Territory	Bul. 248	1905	Utah	Bul. 166	1900
Kansas	Bul. 154	1898	Virginia	Bul. 232	1904
Maryland	Bul. 231	1904	West Virginia	Bul. 233	1904

Pronouncing vocabulary of modern geographical names by G. G. Chisholm. Blackie. n. d. 1s 6d. Gives the pronunciation in various languages of nearly 10,000 names.

Manual of geographical pronunciation and etymology by A. F. Foster. Stanford. n. d. 2s. A list of nearly 10,000 names.

United States Geological Survey ; its origin, development, organization and operation. U. S. Geological Survey. Bul. 227. 1904.

Manual of topographic methods by Henry Gannett. U. S. Geological Survey. Bul. 307. 1906.

Maps and map-making by E. A. Reeves. Royal Geographical Society. 1910. \$2.

Maps ; how they are made ; how to read them by H. N. Dickson. Bacon. n. d. 6d.

Maps ; their uses and construction by G. J. Morrison. Stanford. n. d. 5s.

Interpretation of topographic maps. U. S. Geological Survey. Professional Paper 60. 1908.

Universal map measurer in miles, verstes and kilometers ; for measuring any distance, whether straight, curved, or dented ; such as length of roads, rivers, the sinuosities of coasts, etc. Made in France. May be bought through Stechert or any other importer. 3 fr.

Stanford's compendium of geography and travel. E. Stanford. London. Various dates. 15s. a volume. Australasia, 2v. Africa, 2v. Asia, 2v. North America, 2v. Central and South America, 2v. Europe, 2v. Glossary of geographic and topographic terms, 1v.

Philip's geographical manuals, by William Hughes. Philip, 9v. Various dates and prices. v. 1, Introduction to the study of geography. 1s.; v. 2, British Isles, 1s. 6d.; v. 3, British colonies and dependencies, 2s. 6d.; v. 3a, British empire, 3s.; v. 4, Europe, 2s.; v. 5, Asia, 1s. 6d.; v. 6, Africa, 1s.; v. 7, America, 1s. 6d.; v. 8, Australia and Polynesia, 1s. 6d.

International geography, by H. R. Mill. Appleton. 1909. \$3.50.

Handbook of commercial geography, by G. G. Chisholm. Longmans. 7th edition. 1908. 15s.

Commercial geography, by Henry Gannett, C. L. Garrison, and E. J. Houston. American Book Co. 1913. \$1.25.

Commercial geography, by J. W. Redway. Scribner. 1903. \$1.25.

Geography of commerce, by Spencer Trotter. Macmillan. 1903. \$1.10.

World's commercial products, by W. G. Freeman and S. E. Chandler. Ginn. 1907. \$3.50.

Applied geography, by J. Scott Keltie. Philip. n. d. 2s. 6d.

Climatology of the U. S., by A. J. Henry. U. S. Weather Bureau. Bul. 2. 1906.

Surface water supply of the U. S. U. S. Geological Survey. Water supply papers. Latest edition.

Table of depths for channels and harbors, coasts of the U. S., including Porto Rico, the Hawaiian Islands and the Philippine Islands. U. S. Coast and Geodetic Survey. Latest edition.

Tide table for the Atlantic coast of the U. S., including Canada and the West Indies. U. S. Coast and Geodetic Survey. Latest edition.

Tide table for the Pacific coast of the U. S. U. S. Coast and Geodetic Survey. Latest edition.

Boundaries of the U. S. and of the states and territories with an outline of the history of all important changes of territory, by Henry Gannett. U. S. Geological Survey. Bul. 226. 1904.

Origin of certain place names of the U. S., by Henry Gannett. U. S. Geological Survey. Bul. 258. 1905.

Dictionary of altitudes in the U. S., comp. by Henry Gannett. U. S. Geological Survey. Bul. 274. 1906. All of the U. S. Geological Survey Bulletins giving results of spirit leveling are filed on the shelf beside the Dictionary of Altitudes. They are kept in order by the colored band method, described in the Business Branch pamphlet. When a bulletin covers more than one state, pulp board dummies are made, with colored bands around them, for each additional state and the necessary reference made on the dummy to the state under which the bulletin is filed.

Index to stratigraphy of North America accompanied by geologic map of North America. U. S. Geological Survey. Professional Paper 71. 1912.

Areas of the United States and territories. U. S. Geological Survey. Bul. 302. 1906.

General Maps, a few inexpensive and useful ones

The measurements for maps are north and south by east and west.

United States including territories and insular possessions showing the extent of public surveys, Indian, military and forest reservations; railroads, canals, national parks, and other details. U. S. General Land Office. Annual. 60" x 84". Mounted on rollers. Free to public libraries through their congressman. Price to individuals \$1. For general use this map of the United States is preferable to all others.

United States relief map. U. S. Geological Survey. 1898. 48" x 81". May also be obtained in small scale. 1907. 17" x 28".

Outline map of United States by counties. U. S. Department of Agriculture. 1914. 24" x 36".

Map showing the navigable depths of the rivers of the United States and the principal transportation routes on the sea-coasts and Great Lakes. U. S. Census Bureau. 1890. 17" x 28".

Geologic map of North America. U. S. Geological Survey. 1911. 74" x 56".

Distribution of minerals in the United States. U. S. Geological Survey. 1911. 17" x 28".

Weather maps. U. S. Weather Bureau. Latest edition. 10" x 15". Five maps showing normal sunshine, normal temperature, normal precipitation and lowest temperature.

Shippers' map covering the territory from New York to Chicago and from Saginaw, Mich., to Richmond, Va. Rand, McNally. 1909. 54" x 134". Any section of the United States, as far west as Denver, may be bought. The price varies from \$1.15 per foot for sections of five square feet to 60 cents per foot for sections of 35 square feet or more. The scale is 8 miles to 1". The railroads are clearly marked in different colors. From Denver to the Pacific coast a special map is published on the scale of 18 miles to 1".

Map showing the stations occupied by the United States army. U. S. War Department. Latest edition. 24" x 29". Application for this map should be made to the Chief, Second Section, General Staff. The boundaries of the departments and the location of all army posts are indicated.

Coal fields of the United States. U. S. Geological Survey. 1908. 26" x 36". Contains statistical tables giving areas, estimated tonnage and production of the various coal fields of the United States.

Official parcel post map of the United States. U. S. Post Office Department. 1913. 75c. 22" x 33". Indicates the boundaries of the zones from any given postoffice. There are 3500 variations of this map.

Lincoln Highway; a connected improved transcontinental highway open to lawful traffic of all descriptions without toll charges. Lincoln Highway Association. Inc. 1913. 38" x 60". \$1.

Summer excursion routes. Pennsylvania Railroad System. n. d. 25" x 33". Many railroad circulars contain maps of general value. Although not always accurate, they often present the information in a very useful manner.

Map showing Indian reservations within the limits of the United States. Report of Commissioner of Indian affairs. Latest edition. 24" x 34". Military stations, Indian agencies, schools and insane asylums are indicated.

United States showing primitive wooded areas. U. S. Forest Service. 1908. 60" x 84".

United States forestry map with related projects and data. U. S. Forest Service. 1910. 60" x 84". Shows national forests, proposed Appalachian and White Mountain national forests, U. S. reclamation projects, private irrigated areas, canals and proposed waterways, overflowed lands of lower Mississippi River, principal watersheds, lines of equal precipitation, district boundaries, Indian reservations, and inset maps of Island possessions and Canal Zone.

National forests with transportation routes and supervisors' headquarters. U. S. Forest Service. Latest edition. 24" x 38".

United States showing routes of the principal explorers and early roads and highways. U. S. General Land Office. 1908. 25" x 36".

Mining districts of the western states. U. S. Geological Survey. Bul. 507. 1912. 17 maps of various sizes.

Map of United States showing location of copper-producing districts and of reduction plants operated in 1908-10. U. S. Geological Survey. Mineral resources. 1910. pt. I. 17" x 28".

Part of United States west of Mississippi River. U. S. General Land Office. 1913. 18" x 26". Shows Indian reservations, national parks, national monuments, reclamation projects, office of Surveyor General and land offices.

General charts of the Atlantic coast from Maine to Key West. U. S. Coast and Geodetic Survey. Latest edition, 50c. each.

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|-----|------|-------------------------------|
| No. | 6 | Quoddy Head to Cape Cod |
| " | 7 | Cape Ann to Block Island |
| " | 1108 | Approaches to New York |
| " | 1109 | Delaware Bay to Cape Hatteras |
| " | 10 | Cape Henry to Cape Lookout |
| " | 11 | Cape Hatteras to Cape Romain |

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|-----|----|---|
| No. | 12 | Cape Romain to St. Mary's Entrance |
| " | 13 | Fernandina to Cape Canaveral |
| " | 14 | Cape Canaveral to Fowey Rocks |
| " | 15 | Straits of Florida, including Florida Bay |

Alaska, showing latest explorations by U. S. Geological Survey and U. S. Coast and Geodetic Survey. From National Geographic Magazine. 1914. 15" x 30". Contains information about proposed railroads, overland postal routes, post-offices, mission stations, U. S. public schools for natives, mines, telegraph and wireless telegraph stations, lighthouses, volcanoes, glaciers, military reservations and Northwest Mounted Police. Maps in magazines are practically useless. Removed from magazines and filed in the map collection, they become useful. Note of removal is made in each magazine if there is only one copy in the library.

Map of the Philippines. U. S. Insular Affairs Bureau. 46"x29"

Panama Canal and approaches. U. S. Coast and Geodetic Survey. 1914. Chart 954. 31" x 18". 30c.

Chart of the world on Mercator's projection showing submarine cables and connections, and also tracks for full-powered steam vessels. U. S. Hydrographic Office. 1905. 28" x 47". Tables of distances, including the principal ports of the world.

Neue Cahillsche Weltkartenprojektion nach den Originalzeichnungen des Verfassers. From Petermann's Mitteilungen. 1914. 10" x 14". Illustrates a new map projection which corrects the distortion of the Mercator projection.

Telegraphic connections of the world afforded by the submarine cables and the principal overland telegraph lines. U. S. Hydrographic Office. 1910. 36" x 64". The key indicates whether the telegraphic cables are owned and operated by sovereign states or by private companies.

Official wireless map of the world. comp. by Marconi Wireless Telegraph Co. Philip. 1914. 22" x 33". 2s. 6d.

Principal transportation routes of the world. U. S. Bureau of Statistics. 1909. 22 1-2" x 54". Vessel routes usually followed by steamship lines passing between ports with distances in nautical miles

and a table of distances from New York, New Orleans, San Francisco and Port Townsend to the principal ports of the world and the principal cities of the United States.

Natural forest regions of North America and their characteristic tree growth. U.S. Forest Service. 1910. 18" x 13".

Natural forest regions of South America and their characteristic tree growth. U.S. Forest Service. 1911. 18" x 14".

Products of South America, Central America and the West Indies. Pan-American Union. 1908. 21" x 33". The names of commercial products are printed on the map in the locality in which they are to be found.

Map of Arctic regions. American Museum of Natural History and American Geographical Society. 1912. 36" x 36".

Railway map of the Dominion of Canada. Department of the Interior. Ottawa. 1910. 8 sheets combined to form a single map 57" x 103". Statistical tables of railways giving mileage operated, rolling stock, receipts and maintenance.

Relief map of the Dominion of Canada. Department of the Interior. Ottawa. 1904. 20" x 32".

Carta general de la Republica Mexicana formada en le Secretaria de Fomento por disposicion del Ramo. 1910. 50" x 62".

Handel und Industrie im Europäischen Russland. From Petermann's Mitteilungen. 1913. 21" x 19".

Die Bevölkerungsverteilung in Europa. From Petermann's Mitteilungen. 1913. 18" x 23". A graphic presentation of population density.

Amsterdam. From Bradshaw's Continental Railway Guide. n. d. 15" x 23". A copy of the Guide cost 1s. and from it were taken maps of 20 European cities. The maps are on a larger scale than those in Baedeker and included some cities not contained among the Baedeker maps.

New map of the Balkan Peninsula with adjacent lands and islands comp. by William Stanford. Bacon. 1914. 25" x 19" 3s. A complete index accompanies the map.

International Map of the World

At a geographical conference in London of delegates from many countries on the construction of a map of the world on the scale of 1 : 1,000,000, it was decided that the map should be made by the coöperation of the Surveys of the several countries of the world, and should have an arrangement and notation as follows :

The world is divided into northern and southern hemispheres. Each hemisphere is then divided by parallels of latitude and meridians of longitude into spaces containing each six degrees of longitude and four degrees of latitude. The parallels of latitude, thus subdividing the map, are marked by the letters of the alphabet, beginning with the parallel first north or first south of the equator and extending to the poles, using the letters from A up to and including V. The meridians of longitude used in the scheme are designated by numbers from 1 to 60, 1 being given to the meridian 180 degrees from the meridian of Greenwich. The numbers run westerly around the map.

Any parallelogram containing 24 square degrees, if they may so be called, can under this system be designated, in the manner familiar to all who use maps, by a letter and figures ; J 14, for example, being the parallelogram which covers parts of Colorado, Kansas and other states.

From the U. S. Geological Survey can be obtained indexed diagrams of the northern and southern hemispheres, which will make clear the above explanation.

The U. S. Geological Survey also publishes a sketch map of the United States which shows the arrangement of atlas sheets for this country in accordance with this scheme for an international map of the world.

On this map each parallelogram of 24 square degrees has the single square degrees which compose it numbered from 1 in the upper left corner to 24 in the lower right corner. A map covering one degree of latitude and longitude would by this method be marked J 14—4 or J 14—10, and so on as the case may be.

Each one of the square degrees is again divided into quarters which are designated by the letters A B C D.

Each one of these squares is again sub-divided into quarters which are designated by the letters N W, N E, S W, and S E.

Under this notation, J 14—4 B SE would stand for a map covering 1-16 of a square degree.

The sketch map of the United States above alluded to, copies of which may be secured from the U. S. Geological Survey, will probably make this description plain.

"At the present rate of progress the United States portion will be finished within eight or ten years and when completed it will be about 16' in width." Superintendent of Documents. Price list 53. United States sheets secured from U. S. Geological Survey. Foreign government sheets from Stanford. Price varies. 1s. 6d—2s.

1500 sheets will cover all the land areas of the world.

Published to date :

Africa—Kenhardt ; Austria—Budapest ; Europe—Hebrides, Istamboul, Paris, The Highlands ; United States—Boston.

European War Maps

Map of Central Europe. War College Division, General Staff. 1914. 49" x 46". Prepared as a European War map.

Map showing Franco-German frontier. War College, General Staff. 1914. 25" x 30". Prepared as a European War map.

Map of Europe showing principal cities, rivers, and railroads, with fortified towns, cable routes, table of statistics and useful data for war strategists. Stock Quotation Telegraph Co. 1914. 29" x 34".

European War Zone map. Army Service Schools. 1914 18" x 32". \$1.

Map of eastern theatre of operations. Arms Service Schools. 1914. 81" x 55". \$1. mounted.

Map of western theatre of operations. Army Service Schools. 1914. 48" x 66". \$1. mounted.

Stanford's War Maps. The prices are for coloured sheets only. They may also be bought mounted to fold in case and mounted to hang. The prices given in brackets are post free for cash with order. War map No. 1. Central and Eastern Europe. 27" x 40". 5s. (5s. 6d.)

War map No. 2. Holland and Belgium. 22" x 30". 2s. 6d. (2s. 11d.)

War map No. 3. France with parts of the adjoining countries. 22" x 30". 2s. 6d. (2s. 11d.)

War map No. 4. Franco-German frontier and western Germany. 27" x 40". 5s. (5s. 6d.)

War map No. 5. North Sea and the Baltic. 30" x 22". 2s. 6d. (2s. 11d.)

War map No. 6. Seat of war in Belgium. 41" x 32". 5s. (5s. 5d.)

War map No. 7. Seat of war in France. 30" x 22". 2s. 6d. (2s. 11d.)

War map No. 8. Seat of war in Eastern Europe. 27" x 40". 5s. (5s. 5d.)

War map Nos. 4 and 8 combined. 51" x 36". Mounted to fold in case. 16s. 6d. (16s. 11d.)

English War Office Maps. These may be ordered through Stanford.

Belgium and northeast of France, colored to show elevations. 39" x 30". 2s. 6d. (3s.)

Western Europe; skeleton map by the Geographical Section, General Staff. Shows main roads, rivers, railways, fortresses. 8 sheets printed to date. 8s. (8s. 6d.) Separate sheets, 1s. each. (1s. 5d.)

Central Europe; skeleton map by the Geographical Section, General Staff. 64" x 80". 6s. (6s. 6d.)

State Maps

The U. S. Post Office Department has published maps of all the states and territories which are sold at 80c. each unmounted. Those of a few of the larger states are sold for \$1.60. A list of these may be secured from the Finance Division, Office of the Third Assistant Postmaster General. These maps on heavy paper are clearly printed and delicately colored. The scale varies, but is usually 8 miles to 1". They contain the steam and electric railroads and all the towns and villages with postal facilities. They are lacking in other details.

The U. S. General Land Office has published maps of all the states in which there is public land. These are sold for 25c each. Maps of some of the larger states are published in two sheets for 50c. They are usually on a scale of 12 miles to 1". A list of these may be obtained from the Superintendent of Documents.

The Railroad Commissions of several states have issued maps that may be obtained free or at the cost of postage. They contain a great deal of useful information not found elsewhere.

The U. S. Geological Survey publishes in black and white base maps of the states on the scale of 1 to 500,000, or about 8 miles to 1".

These have been prepared in connection with the works on the International Map of the World, see p. 30, and show accurately all the principal cities, towns, villages, streams, railroads, etc., and the main political subdivisions. Maps of 22 states have been published to date. The price varies from 10c to 45c.

The following list is given to show how a library may secure a complete set of large scale maps of the states at slight cost.

From State Railroad Commissions: Louisiana, Maine, and Texas.

From the U. S. Post Office Department at 80c each: Massachusetts and Rhode Island (single sheet), New Hampshire and Vermont (single sheet), Virginia and West Virginia (two sheets).

From the State Corporation Commission: Oklahoma.

From the U. S. General Land Office at 25c each: Arizona, Arkansas, California (two sheets), Colorado, Florida, Idaho, Illinois, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, Wisconsin, Wyoming.

From U. S. Geological Survey: Alabama 20c, Connecticut 30c, Delaware 10c, Georgia 25c, Indiana 15c, Iowa 20c, Kentucky 25c, Maryland 15c, Michigan 45c, Minnesota 40c, Mississippi 20c, Missouri 35c, New Jersey 10c, New York 35c, North Carolina 30c, Ohio 40c, Pennsylvania 20c, South Carolina 20c, Tennessee 20c, Vermont 10c, West Virginia 20c.

Rural Delivery County Maps

The U. S. Post Office Department has published maps of 924 of the 2972 counties of the United States, covering therefore nearly one third of the entire country, on a scale of one mile to 1". They are printed by the negative sun process on tough blue print paper and are sold at the uniform rate of 20c each. No discount allowed. The size varies with the size of the county, the largest map being 48"x58". These maps lack topographical and geological information, but they

contain other very useful information not included in the topographic sheets published by the U. S. Geological Survey. For example: the rural delivery maps include the names of the roads and principal streets, the names of trolley lines and railroads, the owners of many farms, the names of schools, mills, shops, and institutions in rural communities, the location of houses, cemeteries, etc. These maps do not duplicate to any extent the territory covered by the U. S. Geological Survey, as they cover large sections of the middle West and South for which no topographic maps have been published. They are also more durable, and in most cases are cheaper, as it usually takes more than two sheets of the topographic maps to cover a county, whereas the rural delivery maps cover an entire county in a single sheet. One point of great importance in regard to the county rural delivery maps is that the United States Official Postal Guide serves as an index to them. The difficulty of finding any given place on the topographic maps when the location is not known is that it is necessary first to look in an atlas to get the approximate location in relation to more important towns, then turn to the key map and get the name of the quadrangle. As the key maps are on a very small scale and give very little information it is often necessary to look up two or more sheets before the right one is found. The county rural delivery maps are arranged by states and under each state alphabetically by counties. As the United States Official Postal Guide indexes all post offices in a single alphabet and again by states and again under states by counties it is a very simple matter for any one to find any map wanted.

Local Atlases and Geographical Publications

Topographic atlas of New Jersey. Geological Survey of N. J. n. d. Scale, 1 mile to 1". Includes 20 sheets at 25c per sheet. Cost of mounting and binding about \$10.

New series topographic atlas of New Jersey. Geological Survey of N. J. n. d. Scale, 2000' to 1". 24 sheets published to date. 25c per sheet. Cost of mounting and binding about \$10. The complete atlas will contain over 100 sheets. For the territory covered this atlas is superior to any other. In binding, guards have been left for inserting new sheets as issued.

Atlas of New Jersey. U. S. Geological Survey. Scale, 1 mile to 1". 46 sheets, 10c each. Cost of mounting and binding \$12. Covers the entire state. The sheets are mounted and attached to guards in such a way that they may be removed and new editions inserted. The sheets are arranged in alphabetical order by the name of quadrangle and the Geographic Dictionary of New Jersey, by Henry Gannett, issued by the U. S. Geological Survey for 25c, is bound and inserted in a pocket on the outside of the front cover. This serves as an index and makes the atlas easier to consult than those published by the State Geological Survey, which are without indexes.

See under local maps the use to which topographic atlases of all states can be put as wall maps.

Real estate atlases. The collection now numbers 15 volumes. Includes Newark, Essex County, all neighboring counties, and Greater New York. These atlases give detailed information on width of streets, location of hydrants, elevation above sea level of street corners, size of water and gas mains, house numbers, dimensions of property, shape and character of buildings, etc. The usual price is \$25 per volume mounted and \$18 per volume unmounted. As they are only published at long intervals, six to ten or more years, the cost of maintaining a collection is not so great as it would seem, and the information is of permanent value.

Annual reports of the N. J. Geological Survey from 1854 to date. From 1857 to 1867 no reports published.

Geology of New Jersey by George H. Cook. Geological Survey of N. J. 1868.

Mineral industry of New Jersey for 1912. Geological Survey of N. J. Bul. 11. 1913.

Paleontology of New Jersey. Geological Survey of N. J. 4 vols. in 5. 1886-1907.

Final report of the state geologist. Geological Survey of N. J. 6 vols. in 7 parts. 1888-1906. v. 1, Topography, magnetism, climate; v. 2, Mineralogy, botany, zoölogy; v. 3, Water supply; v. 4, Physical geography; v. 5, Glacial geography; v. 6, Clay industry.

Report on the clay deposits of Woodbridge, South Amboy and other places in New Jersey, together with their uses for fire brick, pottery, etc. Geological Survey of N. J. 1878.

Local Maps

Northern New Jersey and Southern New Jersey. Two maps made from the sheets of the Geological Survey of N. J. Scale 1 mile to 1". Each sheet measures 32" x 23". Northern New Jersey is made of 9 sheets and measures 97" x 70 1-2. Southern New Jersey is made of 7 sheets and measures 66" x 96". These sheets are also bound as an atlas, but they are more easily and quickly used when mounted as wall maps.

Post route map of New Jersey, showing post offices with the intermediate distances on mail routes in operation on the first of June. Latest edition. U. S. Post Office Department. 45" x 33". A very satisfactory single sheet map of New Jersey.

New Jersey. Geological Survey of N. J. 1906. 36" x 25". Called atlas sheet No. 38. Highly colored to show townships and municipalities.

Road map of New Jersey. Commissioner of Public Roads. 37" x 27". Taken from the latest annual report of the Commissioner of Public Roads.

Relief map of New Jersey. Geological Survey of N. J. 1888. 36" x 25". 25c. Called atlas sheet No. 19. The elevations are shown by variations in tints.

Photo-relief map of New Jersey. Geological Survey of N. J. 1896. 45" x 27". \$1.50.

New Jersey showing water sheds, from a report on water power by C. C. Vermeule. Geological Survey of N. J. 1890. 36" x 26". Taken from the annual report of the State Geologist for 1890.

Map of New Jersey showing pumping stations, water sheds now in use on the Atlantic slope, and water sheds available for supplying northeastern cities. Geological Survey of N. J. 1892. 36" x 27". Taken from the annual report of the State Geologist. 1892.

Proposed Lake Passaic. N. J. Water Supply Commission. 1905. Consists of three maps taken from a report. The plan here outlined for conservation of the state's water supply involves an expenditure of several million dollars. This is the report of a reconnaissance only.

New Jersey, showing forest area and its relation to the principal water sheds. Geological Survey of N. J. 1900. 36" x 26". Taken from the Report on Forests for 1899.

Forests of Northern New Jersey. Geological Survey of N. J. 1900. 62" x 71". Taken from the Report on Forests for 1899.

Geological map of New Jersey. Geological Survey of N. J. 1910-1912. 47" x 25".

State of New Jersey, surface geology, showing soils of the glacial drifts of northern New Jersey and approximate bounds of the pine and oak lands of southern New Jersey. Geological Survey of N. J. 1878. 34" x 20". Taken from the annual report of the State Geologist for the year 1878.

Map showing distribution of clay pits and clay manufactures in New Jersey in 1903. Geological Survey of N. J. 1904. 37" x 27". Taken from the final report of the State Geologist. v. 6. Shows clay pits, clay exposures, and potteries; and indicates where brick, fire-brick, fireproofing, conduits, tiles, and terra cotta are manufactured.

Map showing the distribution of the principal clay bearing formations of New Jersey. Geological Survey of N. J. 1903. 37" x 27". Taken from the final report of the State Geologist. vol. 6.

Map showing the distribution of the peat deposits of northern New Jersey. Geological Survey of N. J. 1905. 13" x 17 1/2". Taken from the annual report of the State Geologist for 1905. Shows swamps examined and workable peat deposits.

Northern New Jersey showing the iron-ore and limestone districts. Geological Survey of N. J. 1874. 30" x 42".

Map of New Jersey showing distribution of the active mineral industries in New Jersey in 1912. 10" x 7. Geological Survey of N. J. 1912.

Map showing the distribution of the glacial drift of New Jersey. Geological Survey of N. J. 1902. 17" x 25". Taken from the report of the State Geologist. v. 5.

Map showing the direction of ice movement in northern New Jersey. Geological Survey of N. J. 1902. 24 1-2" x 17". Taken from the final report of the State Geologist. v. 5.

Map of the extinct Lake Passaic showing its outline, the position of the present shore features and the deformation which its shores have suffered. Geological Survey of N. J. 35" x 25". n. d.

The following maps were published in connection with *Geology of New Jersey* by George H. Cook. 1868.

1. Azoic and paleozoic formation including the iron-ore and limestone districts.
2. Triassic formation, including the red sandstone and trap rocks of central New Jersey.
3. Cretaceous formation including the green-sand marl beds.
4. Tertiary and recent formations of southern New Jersey.
5. Group of iron mines in Morris County.
6. Ringwood iron mines in Passaic County.
7. Oxford furnace iron ore veins, Warren County.
8. Zinc mines of Sussex County.

New Jersey's relation to the port of New York; fourth preliminary report of the New Jersey Harbor Commission. No place. 1914. Contains maps of great value. The following have been removed and mounted. In the report they are difficult to handle and would be rarely used. Scattered through the map collection they are frequently consulted. 1. Railroad systems with terminals in New York Harbor. 21" x 24". 2. Steamship lines with regular sailings from New York Harbor. 20" x 24". 3. Waterfront communities bordering on New York Harbor. 21" x 24". 4. Suggested development on Jersey flats of upper New York Bay. 15" x 25". 5. New York Harbor showing location for enlarged navy yard proposed by Captain Van Duzer. 21" x 24". 6. Study for development of the Newark Bay district. 8" x 11". 7. Hudson River Waterfront between Liberty Island and Fort Lee. 228" x 36". This map, 20' long, is practically impossible

to consult in its original form. Removed from the report, cut in three sections, mounted one above the other, it makes a map 108" x 76". Placed on a roller it thus becomes available for quick reference.

Newark and interurban. 96" x 120". A map made up of 16 sheets of the New Series Topographic Atlas published by the Geological Survey of N. J. It is on a scale of 2000' to 1" and gives the names of the principal streets and roads. It extends to and takes in Paterson, New Brunswick, Brooklyn, and Budd's Lake 2000 square miles, with Newark as the center.

A library wishing the best map of any American locality that has been covered by federal or state surveys should take the sheets which together cover that locality, combine and mount them as a single map. In the same way the best state or local atlas obtainable can be made by collecting these sheets and either binding them together or keeping them loose in a portfolio. If the federal survey sheets are used they should be arranged alphabetically by the names of the sheets, to make them useful through the indexes by Henry Gannett. See p. 35.

New York city and vicinity. U. S. Geological Survey. Washington. Latest edition. 45" x 32". Shows better than any other small map the field of commercial development west of the Hudson River and east of Newark and Newark's position relative to the development of Newark Bay and the Hackensack and Newark Meadows.

Railroads and trolleys to Newark. A single map made up by combining six sheets of the 2000' scale sheets of the Geological Survey of N. J. 63" x 67". The railroads and trolleys are outlined with a brush in India ink. It was made to show how all the railroads to New York, save two, pass through Newark, and to show how Newark is the centre of a trolley system embracing nearly all the towns within a radius of fifteen to twenty miles.

Essex County, N. J. Interstate Map Co. 1911. 69" x 60".

Hudson County, N. J. Interstate Map Co. 1910. 72" x 54".

Bergen County, N. J. Robinson. 1902. 67" x 53".

Union County, N. J. Interstate Map Co. 1911. 84" x 60".

Sewage disposal plan for lower Passaic Valley. Passaic Valley Sewerage and Drainage Commission. n. d. 24. The map was taken from a report. It gives a clear idea of the sewerage problem of Newark.

Report of the Morris Canal Investigation Commission. 1904. Contains several maps of special interest to the cities through which the canal runs.

Property map of Lake Hopatcong. Morris Canal Investigation Commission. 1912. 14" x 34 1-2".

Map of the boroughs of Manhattan, the Bronx, Brooklyn, and Queens and part of Richmond, city of New York. Belcher Hyde. 1905. 82" x 72". \$10. mounted.

Hudson tunnel system, showing connections with New York rapid transit lines. Hudson and Manhattan Railway Co. 1900. 20"x26".

Passaic River, Newark Bay to Belleville. U. S. Coast and Geodetic Survey. Chart 565. Latest edition. 37" x 21".

New York Bay and Harbor. U. S. Coast and Geodetic Survey. Chart 120. Latest edition. 32 1-2" x 26".

Soil map of the Trenton area. Bureau of Soils. Field operations. 1902. 35" x 25".

Soil map of the Sussex area. Bureau of Soils. Field operations. 1911. 30" x 40".

Newark Maps

Newark. Interstate Map Co. 1910. 102" x 123". A clear black and white map on which the schools, churches, public buildings, parks and library distributing centres are indicated. It is on a scale of 300' to 1".

New water supply for the city of Newark, showing Pequannock water shed. 1909. 43" x 42". This map was made for the library by the City Engineer to whom were sent the sheets of the geological survey which together cover the locality. On these sheets, which had previously been combined, to form one map, and mounted, he outlined the territory included in the water shed, indicating conduits and reservoirs.

City planning for Newark. City Plan Commission. 1913. Contains several maps illustrating local conditions or problems.

Newark. National Board of Fire Underwriters. Committee on Fire Prevention. 1913. 21" x 25". Taken from report. Shows water supply, fire departments, fire limits, congested tenement district, etc.

Newark. Interstate Map Co. 1915. 36" x 36 1-2". \$2.50 mounted. \$1.50 unmounted. A black and white map which is used as a base for many map studies of Newark. Through the coöperation of the different departments of the city government, the City Plan Commission, if there is one, or through work done in the library a library may acquire maps of considerable value illustrating local conditions. The following list is given as a suggestion of the subjects that lend themselves readily to map presentation.

Increase in area.

Police precinct boundaries.

Ward and election district boundaries.

Pavements.

Sewerage system.

Tree planting.

Park system.

Public buildings ; police and fire stations, hospitals, armories, bath houses, schools, libraries, municipal administrative buildings, etc.

Factory, tenement, residence, trade and warehouse, and financial districts.

Residential map to illustrate congested districts.

Character of population ; nationalities, etc.

Fire prevention ; location of fire houses, hydrants, fire alarms, water mains, etc.

High pressure system.

Transportation ; trolleys and steam roads, passenger and freight terminals, grade crossings, etc.

Population growth from period to period by wards or election districts.

Public recreational facilities and commercialized amusements.

Tuberculosis.

Width of streets ; primary over 60', secondary 60' and under.

Road Maps and Automobile Guides

Catalog of road maps, motorist guides, etc. Hammond. A very useful catalog which includes all commercial publications, maps issued by clubs, blue books and guides. Includes all parts of the United States and many foreign countries.

Bureau of tours of the Automobile Club of America. List of maps sent on application. Discount allowed public libraries.

Automobile official blue book. Automobile Official Blue Book Publishing Co. 5v. Published annually. \$2.50 per volume.

- v. 1 New York State, Canada
- v. 2 New England, eastern Canadian provinces
- v. 3 New Jersey, Pennsylvania, Delaware, Maryland, District of Columbia and southeastern states
- v. 4 Middle West
- v. 5 Mississippi River to Pacific Coast.

Numerous useful local road maps are published as advertisements by newspapers, hotels, and dealers in automobile accessories. These are usually free. Of quite general interest is the pamphlet published by the New England Resorts Information Bureau, entitled, *The Ideal Tour*. Sent free on application.

Official road maps of the New Jersey Automobile and Motor Club. Interstate Map Co. Published in sections. Northern, Northwestern, Northeastern, Seashore, Central, Southern, n. d. Price 25c and 50c each. These maps are on a larger scale than other road maps.

Trolley Maps and Guides

Anderson's Philadelphia and suburban trolley guide. Anderson's Publishing Co. 239 Dock St. Philadelphia. Annual. 10c.

Connecticut guide: steam and electric railway guide for Connecticut and portions of New York, Massachusetts and Rhode Island. E. W. Bennett. 25 Washington St. New Britain, Conn. Quarterly. 15c.

Official street railway guide of Providence and Rhode Island. J. J. Mathews. 19 Exchange St., Providence. 7c.

- Central states guide covering Ohio, Indiana, Illinois, Michigan, part of Wisconsin and western New York and Pennsylvania. The Guide Publishing Co. Norwalk, Ohio. Monthly. 25c.
- Trolley folder and maps of New Jersey. Public Service Railway. Publicity Dep't. Broad St., Newark, N. J. 2c.
- Trolley trips covering 941 miles of lines north and south of Boston. Bay State Street Railway Co. Passenger Dep't. 319 Washington St., Boston. Free.
- Trolley exploring. Brooklyn Daily Eagle. Washington St., Brooklyn. 12c.
- Trolley wayfinder covering New England. New England Street Railway Club. 12 Pearl St., Boston. 10c.
- Trolley trips through New England and Hudson Valley. The Trolley Press. Hartford. 15c.

Lending Maps

Maps of Newark and other local maps of general interest, maps of the War Zone, the Balkans, the Holy Land, maps for use in schools, clubs and the home, maps for debate, and statistical charts are lent to schools, or to individual card holders. There are two methods of mounting maps to be lent, for which the following will serve as illustrations: U. S. topographic maps of New Jersey are mounted on 18" x 22" pulp-board, and the sheets of the new series Topographic Atlas of New Jersey are folded and mounted on 28" x 30" pulp-board.

For detailed description of the method of wrapping and charging maps see method used for pictures, Picture Collection.

Publishers or Sources of Material

- American Book Co., 100 Washington Square, E., New York
American Geographical Society, Broadway & 156th St., New York
American Library Association, 78 Washington St., Chicago
American Museum of Natural History, Columbus Ave. & 77th St.,
New York
Appleton, D. & Co., 35 W. 32d St., New York
Army Service Schools, Fort Leavenworth, Kan.
Automobile Club of America, 247 W. 54th St., New York
Automobile Blue Book Publishing Co., Broadway & 76th St., New
York
Bacon, G. W. & Co. Ltd., 127 Strand, W. C., London
Bartholomew, John & Co., Duncan St., Edinburgh
Blackie & Son, Ltd., 50 Old Bailey, E. C., London
Carnegie Institution of Washington, 16th and P. St., N. W., Wash-
ington, D. C.
Cassell and Co., Ltd., La Belle Sauvage, Ludgate Hill, London
City Plan Commission, 784 Broad St., Newark
Clarendon Press, Oxford
Colin, Amand, Rue de Mezières, 3, Paris
Darling & Son, Ltd., 34 Bacon St., Bethnal Green, E. C., London
Delagrave, Ch., Rue Soufflot, 15, Paris
Department of the Interior, Ottawa
English War Office, Geographical Section, General Staff, London
Geographical Publishing Co., Chancery Lane, W. C., London
Geological Survey, Canada. Department of Mines, Geological Sur-
vey Branch, Ottawa
Geological Survey of New Jersey, Trenton
Gesellschaft für Erdkunde, Wilhelmstrasse, 23, Berlin
Ginn & Co., 70 5th Ave., New York
Hachette & Cie., Boulevard St. Germain, 79, Paris
Hammond, C. S. & Co., 30 Church St., New York
Harrison and Sons, St. Martin's Lane., W. C., London
Hudson and Manhattan Railway Co., 30 Church St., New York

Hyde, E. Belcher, 5 Beekman St., New York
 Interstate Map Co., 315 Market St., Newark
 Johnston, W. & A. K., Ltd., Edina Works, Edinburgh
 Library of Congress, Washington, D. C.
 Lincoln Highway Association, Inc., Griswold & Fort St., Detroit
 Lippincott, J. B. Co., 227 So. 6th St., Philadelphia, Pa.
 Longmans, Green & Co., 38 Paternoster Row, E. C., London
 Lovell, John & Son, 23 St. Nicholas St., Montreal
 Macmillan Co., 64 5th Ave., New York
 Morris Canal Investigation Committee, Trenton
 National Board of Fire Underwriters, 132 Williams St., New York
 National Geographic Society., 16th & M. St., N. W., Washington
 New England Resorts and Travel Information Bureau, 1180 Broadway, New York
 New Jersey Harbor Commission, Jersey City
 New Jersey Water Supply Commission, Trenton
 Newnes, Geo., Ltd., 8 Southampton St., W. C., London
 Pan-American Union, 17th St. & Potomac Park, N. W., Washington
 Passaic Valley Sewage Commissioners, 31 Clinton St., Newark
 Pennsylvania Railroad, 7th Ave. & 32d St., New York
 Perthes, Justus, Gotha, Saxony
 Philip, George & Son, 32 Fleet St., E. C., London
 Publishers Weekly, 241 W. 37th St., New York
 Rand, McNally & Co., 536 South Clark St., Chicago
 Reimer, Dietrich, Wilhelmstrasse, 29, Berlin
 Robinson, E. & Co., 49 Liberty St., New York
 Royal Geographical Society, 1 Savile Row, Burlington Gardens, W., London
 Scribner's, Charles Sons, 597 5th Ave., New York
 Secretario de Fomento, City of Mexico
 Stanford, Edward., Ltd., 12 Long Acre., W. C., London
 Stechert, G. E. & Co., 151 W. 25th St., New York
 Stock Quotation Telegraph Co., 26 Beaver St., New York
 Superintendent of Documents, Washington, D. C.
 The Times, Playhouse Yard, Blackfriars, E. C., London
 U. S. Agricultural Department, Washington, D. C.

U. S. Census Bureau, Washington, D. C.
U. S. Coast and Geodetic Survey, Washington, D. C.
U. S. Forest Service, Washington, D. C.
U. S. General Land Office, Washington, D. C.
U. S. Geological Survey, Washington, D. C.
U. S. Hydrographic Office, Washington, D. C.
U. S. Indian Offices Commissioner, Washington, D. C.
U. S. Insular Affairs Bureau
U. S. Lake Survey Office, Griswold & Larned St., Detroit, Mich.
U. S. Post Office Department, Washington, D. C.
U. S. Soils Bureau, Washington, D. C.
U. S. Statistics Bureau, Washington, D. C.
U. S. War Department, Washington, D. C.
U. S. Weather Bureau, Washington, D. C.
Velhagen & Klasing, Hospitalstrasse, 27, Leipzig
Wagner, H. & E. Debes, Nürnberger Strasse, 46, Leipzig
War College Division, General Staff, Washington, D. C.

Modern American Library Economy As Illustrated by the Newark N. J. Free Public Library

By John Cotton Dana

Volume II

Part XVIII *Reference Work*

Section 1 The Vertical File

By Margaret A. McVety and Mabel E. Colegrove

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INTRODUCTION

This pamphlet is not a complete and systematic statement of how a Vertical File can be used to the best advantage in library administration; it does not even state precisely the methods that are followed, at the date of going to press, in this library. It fails in these two respects, because the use of the Vertical File for a wide range of purposes in the public library is a comparatively recent thing, and because, in our effort to develop it to the maximum of usefulness here, we find it necessary to make frequent changes.

The pamphlet does, however, present some of the causes which have led us to create the file and outlines with considerable detail the processes in accordance with which we operate it and which make it, for us at least, at once relatively the least expensive and absolutely the most important tool the library possesses.

Certain of the processes which seem to be fairly well settled we have described with great minuteness. Of others we have made a more general statement.

If the pamphlet proves to be half as useful to those who may attempt to use it as it is to us who have compiled it, we shall believe it was worth the labor of preparation.

J. C. D.

The Vertical File

Preface

The Radical Change in Library Work Now Under Way

A change in library activities is now taking place, and a more radical one than any they have ever experienced, with the possible exception of the change which took place, hardly fifteen years ago, from the closed-shelved method of administration with the librarian as a keeper of books and the high judge of what each visitor should read, to the open-shelf and free-choice method.

The radical change is being mainly brought about by the increase in things printed.

The Amazing Growth of Print

Modern invention, making printing much cheaper than formerly, has led inevitably to a tremendous growth in output. All see this growth going on, few realize how amazingly swift it is, how the production and the consumption of reading matter seem to increase rather in geometrical than in arithmetical ratio.

And by way of explanation of, though not as an excuse for, the failure of librarians as a class to realize the great changes in scope and method of library management which the growth of printing and of the use of things printed will soon bring, it may be said that printing and print-using gained their present astounding rate of increase only within the past ten or fifteen years. Few yet realize that printing is only now, after 450 years of practice of the art, at the very earliest stages of its development and is but beginning to work on mankind its tremendous and incalculable effects.

The increase of print is marked in new book production, and is perhaps herein most often noted in print and conversation. It is far more marked in periodical literature; perhaps still more in the publications of public institutions and private associations; still more again in the field of advertising by poster, circular, picture and pamphlet; and perhaps most of all in the mere commercial wrapper.

Print Grows by Being Consumed!

Printing has this among its many special characteristics, it grows by the public consumption of its products; it produces the food on which it thrives, though others eat it! Every added piece of print helps to add new or more facile and more eager readers to the grand total of print consumers. And today printed words are before the eyes of every one almost every moment of his waking hours. The maid in the kitchen is confronted with information and instruction on the care of the food in the can she is about to open and on the packages from which she takes her sugar, her salt and even the charcoal for the fire! The son of the idlest rich finds primers and first readers in wayside signs, and on the dials and labels of the car he rides in; while the boy of the streets has his vision flooded with readable things throughout his whole day.

As commerce and industry have grown, print has increased also, and naturally and inevitably more rapidly than either.

Considered merely as an industry and measured by money invested and value of output, print seems to be growing now faster than any other of the great industries, among which it is one of the first; and in view of the fact that a like expenditure each year produces, thanks to invention and discovery, a greater output of things to be read, it must be admitted that in its products, properly measured, print today stands in the front rank of all our manufactures.

The Need of Mastering Mere Knowledge and the Difficulty Thereof

As modern production, commerce, transportation and finance have grown and become more complicated, they have found in print a tool which can be well used in the effort to master the mass of facts which daily threatens to overwhelm even the most skillful in their efforts at safe and profitable industrial management. In spite of all that is reported in print of things done, projects planned, tests made, results reached, in the ten thousand wide-ranging lines of the world's work—from a new gold reef of unexampled richness in the fastnesses of New Guinea's mountains, to the new use of a by-product of a city's garbage—in spite of all that is now put in print, much escapes, or, being printed is unknown to him who can use it to his advantage. And so

our worldly information, to use a sufficiently all-embracing term, goes on piling up ; not all of it in print, but so much of it in print as to make that which is printed almost impossible of control.

Other-Worldly Literature

Nor does the story end here. The problem of efficient handling of worldly information is difficult enough in itself ; but to this is added what we may call in contrast other-worldly information. Social questions which were seemingly quite few in number only a generation ago, have multiplied marvelously as modern industrialism and universal education have produced their inevitable result of complicating our social structure.

Not only are the obvious social questions astonishingly numerous ; it would almost seem that the altruistic spirit of the time—if indeed it is merely of the time, and is not the result of a permanent change in the way in which the individual looks upon his social environment—this altruistic spirit seems quite able to create social questions where none had before been supposed to exist. These social questions demand solution ; societies to solve them straightway arise and, once established, proceed to inquire, to study, to investigate, to experiment, and to publish results. These published results inevitably throw light on the daily routine of the industrialist, a routine already complex enough ; also, they tend to modify public opinion or even almost to create a new and hitherto unheard of public opinion, and this new-born opinion again affects, and often most seriously, the industrialist's routine. Meanwhile this new social service spirit takes hold upon questions of government, complicates them, gives unexpected answers to them, reverses the old ones and, so doing, affects in a startling way the attempts of the industrialist to establish and maintain his routine.

Of all this social-service and government activity the printed output is amazingly multitudinous.

In any city of moderate size the social service institutions, including departments of the city, county, state, and national government, and the private and quasi-public organizations which are attempting to modify opinions, customs, ordinances and laws directly or indirectly, through study, experiment, investigation, exhortation and demand, are so numerous, so active, so persistent and in the main so effective, and

publish annually so many thousand pieces of things to be read, as to make it almost impossible for any organization to have in hand full knowledge of them all. Yet upon every enterprise in that city many of these countless institutions have already produced an effect, or will tomorrow, next week or next year. The wise industrialist would take them into account in planning his campaigns, and finds it extremely difficult to do so.

The Literature of Science and the Arts

Add to this other-worldly literature the tremendous stream of worldly literature already alluded to, and include in the latter the vast flood of trade, technical and scientific journals, proceedings of societies and books and brochures from individuals; and then consider the difficulties which confront, on the one hand, the industrialist who would know of the social, economic, industrial, technical and scientific changes, advances and movements which may affect his enterprise; and confront, on the other hand, the organization, be it public or private, which is trying to keep him duly informed! Moreover, beyond all this is the vast field of research within which countless widely scattered workers, who for lack of swift interchange of knowledge of their respective successes and failures, are wasting their time on misdirected and needless effort.

The Changes Demanded in Library Method

The change which this swift growth of things-intended-to-be read is today imposing on libraries, can now be roughly outlined.

They may properly continue to serve the student, in the old sense of that word, the child and the inquiring woman; they must also serve the industrialist, the investigator or scientist and the social service worker.

It is too soon to say in just what manner this new form of service will be rendered. The difference in the amount of material to be mastered makes a wise method of administration most difficult of discovery; and added to this great difference in amount is a difference in what one may call the proper length of life.

The technique of the management of printed material gathered by libraries has, in its development in the past forty years, been devoted

almost solely to the accurate description, complete indexing and careful preservation of that material. So elaborate was the ritual in this field which was established and quite generally adopted some twenty years ago, that today it costs a library of moderate size from twenty to fifty cents merely to prepare and put on the shelf each one of its collected items, be the same a pamphlet of four pages costing nothing, or a scientific treatise of a thousand pages costing ten dollars. And this takes no account of binding.

It would be useless to attempt here to describe or to enumerate the countless sources from which comes this mass of material which confronts us, and demands of the librarian a reasonable control. It comes from governmental bodies, public and quasi-public institutions and businesses; from private bodies, scientific, artistic, philosophic, social; and from private individuals. It even includes print which is designed to advertise but informs as well; and in this line thousands of makers of things are putting out printed notes on optics, chemistry, travel, food, machines, machine products and a thousand other subjects, which often contain later and fuller and more accurate information than can be gained elsewhere.

The Problem of the Print Which is Useful and Yet Ephemeral

Nearly all this vast flood of print, to the control of which libraries must now in some degree address themselves, is in pamphlet form, and what seems to be of the utmost importance in considering the problem of how to handle it, nearly all of it is, as already herein noted, ephemeral in character, being thus distinguished from nearly all the printed material with which librarians have heretofore busied themselves.

Everything intended to be read which comes into a library's possession must be preserved—such is the doctrine based on the old feeling of the sanctity of print which once was almost universally accepted and still has too wide a vogue. Even to this day those are to be found who urge the library of a small town to gather and preserve all they can lay hands on of all that is printed in or about that town. A few great libraries still profess a willingness, not to say an eagerness, to preserve all and every piece of print that may come into their possession. When President Eliot of Harvard a few years ago,

seeing clearly, as can any whose eyes are open to the progress of printing, that print may overwhelm us if we do not master it, urged that great libraries be purged of dead things, the voice of the spirit of print worship of a hundred years ago was proclaiming that nothing that is printed, once gathered and indexed, can be spared. Whereas, did any large library attempt to gather, and set in order for use under the technique now followed, as large a proportion of all that is now printed, as it did of what was printed in 1800, it would bankrupt its community and fill all its rooms solid to the ceilings in a few years if not in a few months.

The amazing growth of the printing industry is overturning the old standards of value of things printed and the old method of use, has indeed already done it, though a few as yet realize that this is so.

To establish this fact is one of the primary purposes of the whole argument, and it may well be restated here. To emphasize its truth, two more things may be mentioned, the moving picture film and the phonographic record. Historically these are as important as are any printed records of our time; one may even dare say that historically they are the most important of all current records. Yet what library dare take upon itself the task of gathering and preserving and indexing them?

Here we have two kinds of records of contemporary life, both closely allied in character to printed things, which the all-inclusive library does not even attempt to gather, list and index. Difficult as it would be for any one library, or even any group of large libraries, to collect and preserve all these records of the human voice and of the visible activities of men, still more difficult would it be to gather and save all that is printed today. For that matter, the consistent advocate of the doctrine of saving all that is printed should go a step further and put a stenographic reporter at every street corner to save the day's gossip. Much of that gossip is far more nearly a true record of the times than is much of the stuff that gets itself printed.

The Proper View of What to Do With Print

The proper view of printed things is, that the stream thereof need not be anywhere completely stored behind the dykes and dams formed by the shelves of any library or of any group of libraries; but

that from that stream as it rushes by expert observers should select what is pertinent each to his own constituency, to his own organization, to his own community, hold it as long as it continues to have value to those for whom he selects it, make it easily accessible by some simple process, and then let it go.

But the expert and student may rest assured that the cheapness of the printing process of our day—to become far cheaper still within a few years—and the natural zeal and self-interest of inquirers, students, compilers, indexers and publishers, will see to it that nothing that is of permanent value, once put in print, is ever lost. Not only are there made in these days compilations and abstracts innumerable by private individuals for their own pleasure and profit; but also a very large and rapidly increasing number of societies, some of them with governmental subvention, are devoting large sums of money, high skill and tireless industry to gathering, abstracting and indexing records of human thought, research and industry in all their forms.

The New Library Creed

Select the best books, list them elaborately and expensively and save them forever—this was the sum of the librarian's creed of yesterday. Tomorrow it must be, select a few of the best books and keep them, as before, but also, select from the vast flood of print the things your constituency will find helpful, make them available with a minimum of expense, and discard them as soon as their usefulness is past.

This latter creed has been as yet adopted by very few practicing librarians. It is gaining followers quite rapidly, however, in the fields of research and industry. The leaders in these fields are rapidly and inevitably learning, as the notes which follow show, that only by having accessible all the records of experiment, exploration and discovery pertaining to their own enterprise, wherever made, can they hope to avoid mistakes, escape needless expenditures and make profitable advances in any department of science or in any kind of industrial or social work.

The Limitation of the Older Type of Libraries

The fact that we now have an active movement for the establishment within large industrial enterprises of special departments for the proper control of all pertinent printed information, is of itself good

evidence that the needs these departments supply are needs which public and college libraries of the conventional type are not supplying. Other evidence could be set forth from State libraries, municipal libraries and libraries of legislative research.

It is not suggested that libraries of the type of ten or even five years ago, public, proprietary, State, historical, could ever do the work which the enlightened industrialist of today asks of the special print-handling department he sets up in and for his own organization. But this seems evident enough from all that has been said, that the old type of library must modify itself in accordance with the new needs which the evolution of knowledge and the growth of print have created. Speaking of the free public library only—though what is true of this is true in a measure also of the college, university or historical library—it should try to master so much of the flood of print as is of importance to its community as a whole, and to those aspects of industrial life which are common to all men and women of affairs in its community.

This preface has failed of its main purpose if it has not shown that the public library should equip itself to handle a vast amount of ephemerally useful material, and should, by its methods in this work, suggest to the large business institutions how helpful they would find the adoption of similar work within their respective fields.

The Vertical File

The name vertical file is given to a set of folders, on which names of subjects have been written, standing upright in a drawer or tray, each in its alphabetical place according to its subject. In these folders is dropped the vast mass of material, daily growing larger, which furnishes the most recent and up-to-date information unavailable in books and unindexed in magazines. The last word on the opera, bills pending in Legislature, activities of every social organization in the city, the latest announcements of the civil service commission, in fact, answers to countless questions on topics of today are supplied from the vertical file.

The material comes to the library at very slight cost compared with its value and is secured largely by request or exchange. It consists of bulletins, catalogs, documents—city, state and national—monographs,

society publications, reports, reprints, address cards, announcements, programs, lists, clippings, leaflets, letters and the like, which experience has proved to be more useful for daily information calls than the majority of reference books. This material is later more fully described.

The Vertical File

The File we Use and How we Use it

Library Bureau two-drawer, quartered oak, correspondence file units. Inside measurements of drawers, 10 inches high, 12 inches wide, 22 1-4 inches deep, each fitted with roller slides. Price \$16. Four of these units, or eight drawers, placed one upon another and standing on a three inch base of white wood form a section. Five sections, forty drawers, are used for reference material, not lent; and three sections, twenty-four drawers, are used for lending material in the Reference and Lending Department of the main library. Five units are used in the Technical Department, two in the Art Department, four in the Children's Room and nine in the Business Branch in the centre of the city. A slide between the top unit and the one next below makes a convenient shelf for the examination of folders. We also have one of the Library Bureau movable shelves which may be fixed in a second to the handle of any one of the drawers.

Manila folders are used, Library Bureau No. 5030; cost, \$6 per M; dimensions, unfolded, 18 1-2" x 11 3-4"; folded, back side, 11 3-4" x 9 1-2, front side, 11 3-4 x 9". That is, the back face is half an inch higher than the front. On this extension the subject headings and cross references are printed by hand in ink in the upper left corner. For thick pamphlets or large groups of material on one subject extension folders are convenient, Library Bureau No. 5015, costing \$8.50 per M. Usually all purposes are served by a further division into two or more folders by date, or by some subdivision of the subject of the collection.

"See" references are written on manila sheets, upper left corner, size 11 3-4" x 9 1-2". Rubber stamps are provided for the words "See" and "See also".

Guide cards are of heavy gray pressboard, Library Bureau No. 6050. One set of 250 alphabetical divisions, printed on thirds, are supplemented by cards of the same quality, plain, cut in thirds, on which additional divisions are printed by hand as needed.

Material similar to that which we use—furniture, drawers, guides and folders—is for sale by several firms at varying prices, and requests for descriptive circulars are promptly answered. For example: Yawman Erbe Co., Boston, N. Y., and Newark, Art Metal Construction Co., Jamestown, N. Y., The Globe-Wernicke Co., Cincinnati, Ohio.

Sources of Material

The material comes from many sources :

a. Exchanges ; for The Newarker, for annual reports of the library, and for library bulletins or occasional publications in pamphlet or list form.

b. Duplicate pamphlet documents of our own state and city government, also federal documents of special current importance.

c. Reports and publications of local associations, clubs, etc., including educational, social, charitable and religious bodies.

d. Newspaper clippings from two New York, one Boston and all local papers, with occasional items from others.

e. Purchase of important publications mentioned in the weekly bulletins of the Public Affairs Information Service, described in this pamphlet, in magazines, in reports, in bibliographies, in announcements of conventions.

f. Gifts from friends who have used the collections, from authors, editors, compilers and many other sources.

Partial List of Items Received and Added to Vertical File in Five Days

Dates of withdrawal and classification heading are the last
two entries under each item

New York State Reformatory for Women at Bedford Rept. 1914
64 p D JI '16 Prisons and Prisoners

Rept. of the City Council Com. on Crime of the City of Chicago.
196 p 1915 Keep Crime and criminals

Regulations of exportation tax, with benefit of drawback of articles
in Schedule B. Oct. 12, 1914 D JI '16 Internal revenue

Com. for Immigrants in America Poster on "Fourth of July"
Americanization Day D JI '16 Naturalization

Copy of Commissioner Howe's letter to Mayors telling what the committee is trying to do D JI '16 Naturalization

Com. for Immigrants in America Prize for program on How To Americanize Immigrants D JI '16 Naturalization

Art Alliance of America, 45 E 42d St., N. Y. Announcement of meeting of the Board of Directors. Directory

New Jersey Housing Assn. Program. 3d An. Conference. Passaic May 27-28, 1915 D JI '16 N. J. Housing

Society of Printers. Special meeting at City Club, Boston, May 19, 1915 In anticipation of New York trip Directory

What is the matter with the United States by Herbert N. Casson (Broadside) Destroy

Women's Political Union of New Jersey. Letter from the President announcing a campaign luncheon, the speakers, etc. May 29, 1915 D JI '16 Newark, N. J. Women's Suffrage

International Brotherhood of Bookbinders Local Union, Newark, N. J. 4p. leaflet notifying librarians, superintendents of schools and others of violations of the laws 4p Destroy

Seattle Children in School and in Industry by Anna Y. Reed 107p D JI '16 Child labor

Everybody's Business. Issued semi-weekly Wisconsin Efficiency Bureau. No. 22. Wisconsin's largest state business, the University 4p D JI '16 Educational surveys

Seattle Juvenile Court's message to the community Rept. 1914 65p D JI '16 Juvenile courts

International Conciliation Jan. 1914 March 1914 Duplicate copies B JI '16 Peace

City History Club, 105 W 40th St., N. Y. Calendar Jan. 1915-April 1915 4p Directory

Program Dedication of Tablets May 31, 1915 Destroy

Lincoln Highway vol. 2 No. 21 May 27, 1915 Weekly broadside of association's activities D JI '16 Lincoln Highway

Nat'l Assn for the Study and Education of Exceptional Children
Front Bldg, Plainfield, N. J. Letter explaining lack of publications
1914 Directory

U. S. Government Publications on Health, Disease and Sanitation
Supt. of Documents, Washington, D. C. Keep U. S. Documents—
Price lists

Unicameral Legislatures; Debate Univ. of Oklahoma Dec. 1913
69p D Jl '17 State legislatures

List of references on the Rockefeller Foundation 4p D Jl '16
Rockefeller Foundation

City Controlling the Development of Private property (address)
by G. B. Ford 28p D Jl '17 Police power

"Where Will I Find Sales Easiest During the War?" 18p Adver-
tiser's Service Bureau, N. Y. D Jl '16 Business conditions

Who Wanted War? From diplomatic documents by E. Durk-
heim and E. Denis Paris B Jl '17 European war

German Atrocities from German Evidence by J. Bèdier Paris
B Jl '17 European war—Germany

Violation by Germany of the Neutrality of Belgium and Luxem-
burg by A. Weiss Paris Keep European war—Germany

Free Public Bath Com. of Baltimore Rept. 1914 Destroy

United States and This War. Speech of Sir Gilbert Parker on
anniversary of the death of Lincoln 10p London, April 15, 1915
B Jl '17 European war—American interests

British Blockade by A. J. Balfour London 1915 B Jl '17
European war—England

War-Words; a key to the spelling and pronunciation of terms
brought into public notice by the war Literary Digest, N. Y. 30p
Destroy

Social Work with Families and Individuals. Manual for investi-
gators by P. R. Lee N. Y. School of Philanthropy B Jl '17
Social work

Probation Officer at Work by H. W. Thurston N. Y. School of
Philanthropy B Jl '17 Probation system

Board of Sunday Schools of the Methodist Episcopal Church, Chicago Home Dept. 16p Hand Work in the Sunday School 20p Activities in the Teen Age Division 11p Graded Sunday School 19p D J1 '16 Sunday schools

Rumania : her history and politics by D. Mitrany 40p 1915
B J1 '16 Roumania

Full details of German Trade, Where it is and what it is 52p
London Commercial Intelligence D J1 '16 Germany

Elimination of Grade Crossings in Portland, Oregon, by H. W. Holmes 30p maps 1915 D J1 '17 Grade crossings

Public Welfare and the Holding Company by J. P. Goodrich 12p
Reprint from An. of Am. Acad. of Polit. Sci. Jan. 1915 Destroy

Ownership, Insurable Interest, and Change in Interest by E. J. Nathan N. Y. 1915 D J1 '16 Insurance

Gaunt Local Option Bill. Speech of Hon. J. W. Griggs in opposition Feb. 2, 1915 D J1 '16 Temperance

Baby Saving Work of the Oranges Rept. of the Civic Com. of the Woman's Club, Orange, N. J. May 1, 1915 D J1 '16 Child welfare.

Uniform Type Com. of the Am. Assn. of Workers for the Blind Rept. 1913 Keep Blind—Books for

Jitney Regulations: Summary of Ordinances of Nine Cities 4p
Milwaukee Library 1915 D J1 '17 Jitney buses

Industrial Bulletin No. 2 June 1, 1915 Erie R. R. Industrial Dept. 1p Destroy

Child Study for Child Welfare. How to organize Parents' Associations or Mothers' Circles in public schools. 35p Nat'l Congress of Mothers 1914 Keep Child welfare

Deaf Boy Who is Being Rightly Trained by H. W. Andrews 8p From Volta Rev. May 1915 D J1 '17 Deaf and dumb

Teachers' Year Book of Educational Investigations. 75p Standards for measuring the efficiency of school instruction and administration N. Y. 1915 D J1 '17 Education—N. Y. City

Public Recreations Rept. of the Com. N.Y. 11p 1914
D Jl '17 Recreations

Garbage Reduction Plant of Columbus, Ohio Rept. 23p 1914
D Jl '16 Refuse & refuse disposal

Workers' Health Bulletin Issued by the Board of Sanitary Control in the cloak, suit and skirt and the dress and waist industries. 25p
N.Y. 1915 D Jl '16 Welfare work

Murthy's Cabbage; biographical dictionary of cats in literature by
H. M. Chapin 8p 1915 Keep Cats

Fire Prevention Text-Book for the Public Schools of Nebraska by
C. A. Randall. 47p B Jl '17 Safety movement

Montessori System of Child Culture. Rept. to the State Bd of
Educ of R. I. by C. E. Craig. 16p 1913 D Jl '16 Montessori, Dr. Maria

Place of the Public Defender in the Administration of Justice by
W. J. Wood. Oakland 1914 D Jl '17 Public defenders

Amer. Public Health Problems 38p Prudential Insurance Co.
B Jl '16 Public health

Clean Streets Through Education and Coöperation. Rept. of
Exhibition and tests of street cleaning appliances. 56p N.Y. 1914
D Jl '17 Street cleaning

Love and Health; better breeding for the human family by Matteo Teresi. 101p 1914 D Jl '17 Eugenics

Minimum Wage Com. of Mass. 2d Rept. 158p 1917 B D
'15 Minimum wage

Wages of Women in Retail Stores in Mass. 62p Minimum
Wage Com. 1915 D Jl '17 Wages

Canada, Census and Statistics. Monthly 120p April 1915
D Jl '16 Canada

Steadying the World's Price of the Staples. Int'l Commerce Com.
on Ocean Freight Rates 23p 1915 D Jl '16 Freight rates

Congresses, Conferences, Conventions. Panama-Pacific Internat'l
Exposition San Francisco 86p 1915 D Jl '16 Insurance—
Life

Conference on Life Insurance and Its Educational Relations 93p
Univ. of Ill. 1914 D JI '16 Insurance—Life

Treatment and Care of the Insane in Penn. by C. F. Haviland
94p 1915 B JI '16 Insanity

Feeble-minded Citizens in Penn. by W. E. Key 63p 1915
D JI '16 Insanity

Park Commissioners. Minneapolis. Rept. 157p 1914 D J
'16 Parks

Ships and Shipping of old New York. Commerce of N. Y. from
the foundation of the city to the beginning of the Civil War 61p
1915 Bank of Manhattan Co. B JI '16 N. Y. City—History

Nat'l Domain in Canada and its proper conservation by F. D.
Adams 48p 1915 Ottawa B JI '16 Canada

Military Administration ; Civil Service Laws, Secretary of State and
Law Officers ; Efficiency and economy commissions in other states.
Reports prepared for Efficiency and Economy Committee. Illinois
100p D JI '17 Efficiency

Garrett Biblical Institute Bulletin. Courses. Autumn quarter 23p
1915 Evanston, Ill. D JI '16 School catalogs

Form of Motor Bus Franchise and Routes. Borough of Manhattan
April 1915 32p Map N. Y. D JI '17 Motor buses

Public Opinion Aroused : Expressions upon the necessity of ending
the delay in improving Jamaica Bay 40p 1915 Destroy

Market Scheme Is Finally Defeated. Mayor's veto sustained
(clipping) D JI '16 Newark—Markets

(100-200 clippings received weekly)

Preparation of Material

Five essentials are to be kept in mind : (1) Select from the vast flood
of print ; (2) make it available at a minimum expense and (3) in
the shortest possible time ; (4) lend duplicate copies ; (5) eliminate
as soon as usefulness is past.

Selection

From the day's mail and from the previous day's collections all
circulars, society reports, pamphlets, magazine excerpts, clippings, etc.,
are stamped with the date of receipt in the lower left margin and are

sent to the order department. All that call for such treatment are there acknowledged and all are then distributed to the various departments according to the nature of each item: art to the art department, scientific and technical to the technical department, young folks to the children's room, business to the business branch, and all others to the reference department.

Preparation of Clippings

The material received in the reference department is treated as follows:

The care of the file is assigned to an assistant. This assistant, once a week or oftener, sorts the material received into "life groups", that is, estimates the sort of use and the probable period of usefulness of each item. "Discard Jl '15", "Bind Jl '15", "Discard Jl '16", "Examine Ag. '16", "New Ag. '16", "Lend Jl '16", "Keep" and "Directory", are the names assigned these groups.

"Discard Ja '16" is the name of the group which is to be discarded twelve months from the month in which it is stamped and added, Jan. '15. The date for this group is of course changed each month, being always twelve months ahead of the time when the material in the group is placed in the file.

"Bind Jl '15" is the name of the group which is to be taken out and bound twelve months from the month in which it was added. Date is advanced each month.

Example: Pamphlets received in February, 1915, are stamped "Bind Feb '16". Thus all pamphlets received during any month are stamped with the date of the twelfth month following their receipt.

"Discard Jl '16" is the name of the group which is to be discarded twelve months from the month in which it is stamped and added. Date is advanced each month.

"Examine Ag. '16" is the name of the group which is to be examined twelve months from the month in which it is stamped and added. Date is advanced each month.

"New Ag. 16" is the name of the group of items which is to be replaced by later issues, or numbers, of the same, twelve months from the month in which those items are stamped and added. Date is advanced each month.

"Lend" is the name of the group which is to be placed in the file, the contents of which are lent.

"Keep" is the name of the group which is to be retained in the reference or lending files indefinitely.

"Directory" is the name given to the lists of societies which publish literature on social questions of the day. The Directory is described in this pamphlet.

For each group there is a card, four inches wide by twelve inches long, on which is stamped in the proper place the exact legend with which every item of that group is to be stamped. These boards are placed some distance apart in rows on a table and serve as a sorting device to expedite the work of classification. The items distributed on each board on any morning are strapped to it by a rubber band to keep them in order. A page or messenger then folds, if need be, and stamps the face of each piece according to the example of the guide card on which it lies. A Gregory rotary rubber stamp is used for dating. It was made to order with two rows of capital letters and months and years and may be adjusted to any required date legend. A rubber stamp "Newark Library Vertical File Reference", is used on the upper right face of each item. The words "Discard", "Bind", are indicated by the letters D and B on the Gregory stamp.

The use of these names or legends is later explained quite fully under the heading Revision of the File. For clearness it is noted here that one or the other of them is stamped on every item—pamphlet, leaflet, clipping, or what not—that is placed in the file. When the file is used these legends are noted. If on any item a date is noted which is earlier than the date in which it is observed (for example, one uses the file in August '15 and finds on a pamphlet a legend bearing the date Jl. '15) that item is not returned to the file, but is laid aside to be treated by the person in charge in accordance with the directions in the legend. In this way the file is in a measure always undergoing a quasi-automatic weeding process. In the annual revision of the file a systematic search is made for these past dates. We consider this automatic weeding procedure, and the method by which it is brought to pass, of the utmost importance.

Subject Headings

Headings are assigned according to the following instructions :

- 1 Examine the subject matter of each piece.
- 2 Do not use a heading simply because it occurs in the title or headline.
- 3 Consult the Official List of Headings, and if in doubt compare with the corresponding folder in the file.
- 4 If the selected heading appears in the title of the pamphlet or in the headlines of the clipping it is to be underscored in pencil.
- 5 To avoid ambiguity in case of inserted headings, the first word is to be twice underscored.
- 6 If the heading is supplied it is to be written in pencil in the upper left corner.
- 7 For new headings, after examination of subject matter, consult the Readers' Guide, and other lists of headings.
- 8 Avoid unnecessary subdivisions under subjects where there is little material.
- 9 In the application of the principles of subject headings, as stated in Cutter's Rules for a Dictionary Catalogue in the preface of the A. L. A. subject headings, note the following variations :

From the briefer and more temporary character of the material to be treated, it is often possible to give a more definite or "catchy" heading than would describe or befit the dignity of a printed book.

Few general references and more specific cross references between coördinate and nearly synonymous terms are required.

Make "See" references for inverted headings and from any term never to be used to the heading chosen.

Do not refer from a subject to its subheads.

- 10 The new headings are to be added to the Official List of Headings as soon as approved by the head of the department, and the necessary cross references are made on this list and on the V. F. folders.

The File is Arranged Alphabetically by Subjects

Two years ago we sent a letter of inquiry as to the methods of filing, indexing and using pamphlets, leaflets, clippings from magazines

and papers &c., to more than fifty libraries, special and general. We had already used the vertical file as a daily tool in supplying information to our clientele; had found that it promised to be, what it later proved to be, by far the most useful of all the library's information opportunities; and were on the point of bringing our inquiries and experiments to definite conclusions, to lay down a set of rules, and to make the whole scheme as consistent, well-rounded and continuously workable as possible.

We received about thirty replies to our letter. From these we learned that special libraries had generally adopted the vertical correspondence file for the arrangement of miscellaneous material other than books and magazines; most of them keeping clippings, and many of them maps and photographs in this way. The arrangement of material in the file seemed to be still a matter of discussion, with a general tendency to a classed scheme. In several cases an expansion of the decimal classification was used, and in several a special classification had been developed.

Public libraries were keeping miscellaneous material in pamphlet boxes, envelopes and vertical files. The arrangement varied; but classified schemes were applied quite generally to pamphlet boxes placed on the shelves with the books. Dictionary schemes were in favor for vertical files.

A careful examination of the experience of others and of our own and of the general arguments for and against both class and alphabetical arrangement of material resulted in the selection of the dictionary plan for this library.

Reasons for an Alphabetical Scheme

The dictionary card catalog is the easiest one for the public and for assistants to use. The elasticity of the dictionary plan, and the ease with which material filed under this arrangement can be found, are two good reasons for using it. The Decimal classification would need to be expanded, in many groups, to cover the miscellaneous and rapidly increasing number of new topics, and the distinctions could only be expressed by numbers, and an index to the numbers would be essential.

In the dictionary scheme all references from one heading to the other headings under which related material might be found are in their proper alphabetical places and bring together, much more closely than by number classification, the topics of related interest. For example: Foods, adulteration of; Food law; Food supply.

In a classified scheme several numbers would have to be consulted before all information about food could be found.

The problem of assigning correct headings to pamphlets is not greater than that of selecting correct or most-commonly-used headings for other literature. The Readers' Guide supplies well known and the most consistent headings for current use. Differences of opinion about such headings and classification numbers are necessarily provided for by the use of cross references.

In passing it should be stated that answers to our letter of inquiry showed that the problem of elimination of useless accumulations is not mentioned by six libraries, is not yet attempted in three, is carried on by file experts in two, is called difficult in three; that old and new clippings are separated in one, and that constant weeding while filing is done in one. None had tried stamping a date for discarding on each item to be filed, which we have found an easy and inexpensive method. This plan, before described, had already been adopted in this library.

Official List of Headings

For a time our subject headings were kept only on the folders themselves in the file. Then a card list of them was made. This grew with great rapidity and soon became too large to be consulted quickly. Finally we decided so to print them, in an inexpensive style, as to make it possible to use them and to add to them with a minimum of trouble.

To the reasons given for printing the headings this should be added: Vertical Files, identical in character with that for general reference work in the main building, had been established in the Art and Technical Departments and in the Business Branch. We found that it was of the utmost importance that each of these files be identical with all

the others in the arrangement of its material. Not that each department might not have material peculiar to itself; but that material of like character should be placed under the same heading in whichever of the four files it might be found. Concerning this identity of method the following rules, issued to all departments, should here be quoted:

Vertical File Rules

" Printed headings of Vertical File are to be followed in all Vertical Files in every respect.

The headings are to be written on the folders always in the same place. Lists of societies, whether made in or for the vertical file or for other purposes, are to follow precisely the rules made for like entries in the main library reference file, whether the societies thus listed are actually to be found in that file or not.

Every department or branch which has a vertical file must at once check its headings by the printed list and make an accurate copy on sheets of all entries that are not found in the printed list or that vary from it in any respect. In making this list, change as many headings as possible to conform to the printed list, in order that the list of variations may be as brief as possible.

These additions and variations, with the material to which they refer, must be submitted to the assistant in charge of the vertical file in the main library for her changes and approval at once.

She will return these lists, revised, and her revision must be followed absolutely. After these lists have been sent to her, no entries other than those found in the printed list are to be added to any vertical file until those entries, with the material to which they refer, have been submitted to her for revision and approval. These suggestions can be sent on Wednesdays only.

It is most essential that all vertical files be consistent with one another. They can be thus made consistent only by one person and that person must have knowledge of and skill in cataloging.

Appeals from and arguments for changes in the decisions of the assistant in charge must be put in writing and addressed to the librarian."

[*Text continued on page 28*]

**Index of Subjects covered by Publications of Organizations
in the List which follows this List**

- Accounting, 1
Alcoholism, 1
 See also Liquor problem ;
 Saloons ; Temperance
Arbitration, International 2
 See also Peace ; War
Arbitration and conciliation,
 Industrial, 1
Automobile laws, 7
Banks and banking, 8
 See also Agricultural credit ;
 Finance ; Money
Baths, Public, 4
Bill-boards, 10
Blind, 6
Charities, 1
 See also Outdoor relief ;
 Philanthropy ; Social
 work
Child labor, 1
Child welfare, 5
 See also Prenatal influences
City planning, 9, 10
 See also Garden cities; Hous-
 ing problem ; Municipal
 improvement
Conservation of resources, 10
Convict labor, 1
Cost of living, 1
 See also Co-operation ; Postal
 express
Country life, 1
County government, 1
Efficiency, 1
 See also Scientific manage-
 ment
Factory inspection, 3
Housing problem, 9
 See also Garden cities
Hygiene, 4
Immigrants in the U. S., 35
 See also Jews ; Naturaliza-
 tion ; Syrians
Industrial betterment, 3
Insurance, Social, 3
International law and relations,
 2
 See also Arbitration, Inter-
 nat. ; Monroe Doctrine ;
 Peace ; War
Labor laws, 3
 See also Employers' liability ;
 Injunctions
Minimum wage, 1, 3
Municipal improvement, 9, 10
 See also Village improve-
 ment
Municipal research, 3
Open and closed shop, 12
 See also Trade unions
Parks, 10
 See also National parks ;
 N. Y. (city), Parks and
 Playgrounds
Peace, 2
 See also Arbitration, Inter-
 national ; War
Public baths,
 See Baths, Public
Public comfort stations, 10
 See also Newark, Public com-
 fort stations

- Public health, 10
 - See also School hygiene
- Public service corporations, 9
- Recreation, 29
 - See also Games ; Play ;
 - Social centres ; Sports
- Referendum, 1
 - See also Democracy ; Recall
- Refuse and refuse disposal, 9, 10
- Roads, 7, 9
 - See also Pavements ; Streets
- Safety devices, 3
 - See also Employers' liability ;
 - Railroads, Signals
- Taxation, 1
 - See also Income tax ; Inheritance tax ; Municipal finance ; Single tax ; Tariff
- Tramps, 1
 - See also Farm colonies ; Unemployed
- Trusts, 1
 - See also Corporations ; Sherman anti-trust law ; Standard oil company ; Tobacco trust ; U. S. steel corporation
- Unemployed, 3
- Village improvement, 10
- Water supply, 9
- Woman suffrage, 1
- Workmen's compensation, 3

Organizations Interested in Social Questions

- 1 American Academy of Political and Social Science, Philadelphia
- 2 American Association for International Conciliation, 407 W. 117th St., New York
- 3 American Association for Labor Legislation, 131 East 22nd St., New York
- 4 American Association for Promoting Hygienic and Public Baths, W. D. Hale, Secretary, Brooklyn
- 5 American Association for Study and Prevention of Infant Mortality, 1211 Cathedral St., Baltimore
- 6 American Association of Workers for the Blind, 316A Monroe St., Brooklyn
- 7 American Automobile Association, 437 Fifth Avenue, New York
- 8 American Bankers' Association, 11 Pine St., New York
- 9 American City Bureau, 93 Nassau St., New York
- 10 American Civic Association, North American Building, Philadelphia

Part of the printed list of subject headings, being about half of the entries under the letter P

Physiognomy

Picture books

Picture collection—a

Picture dealers' catalogs—a

Pictures, Lists—a

Pines—t

"Pineys"

See N. J., Defective classes

Piranesi—a

Pirates

Plank—a

Plant industry—t

Platinum

Platt, C. D.

Play

See also Games : Sports

Playgrounds—b v

See also Recreation ; Parks

Plays—bjv

See also Drama ; Drama league of America

Pocahontas

Poe, E. A.

Poems

See also names of poets

Poetry

Poisons—t

See also Drugs

Polar regions

Police signals—t

See also Alarm telegraph system

Policewomen

Poliomyelitis—t

See Infantile paralysis

Political parties

Political platforms—bv

Politicians

Politics

See also Elections ; Lobbying ; Primaries ; Suffrage

Politics, Corruption in

Pontifex maximus

Poor—bv

See also Charities ; Philanthropy ; Thrift ; Tramps ; Unemployed

Population, Congestion of

See Congestion of population

Portland art association—a

Porto Rico—b v

Portraits—a

Ports—b v

Portugal—b v

See also Docks ; Harbors

Postage stamps

Postal express

Postal rates

Postal savings banks—b v

Postal service

Post-card dealers—a

Poster stamps

Posters—a

Potatoes—b t

Potentiometers—t

Pottery—b v

Poultry—t

Poverty

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Preferential system of voting

Prostitution

See also Sex hygiene ; Social problems ; White slavery

Prenatal influences

See also Eugenics ; Heredity

Presidents, U. S.

See also names of presidents

Presidents, U. S., Length of term**Presidents, U. S., Messages****Prices—b v****Primaries****Primaries, Presidential****Princeton, Battle of****Princeton university****Print collections in libraries—a****Printing—a b t v****Printing, Bibliography****Printing, Cost—t****Printing machinery—t****Prints—a****Prints, American—a****Prison labor**

See Convict labor

Prison ships**Prisons and prisoners**

See also Borstal system ;

Indeterminate sentence

Prize fighting**Probation system**

See also Juvenile courts

Profit-sharing**Progressive party****Prohibition**

See also Alcoholism ; Liquor problem ; Temperance

Projectiles—t**Projection apparatus—t****Prophecies**

See also Mother Shipton

Proportional representation b v**Protestant episcopal church****Proverbs****Prudential Insurance Co.—b****Pruning—t****Pseudonyms****Psychical research****Psychology****Psychotherapy**

See Mental healing

Public Affairs Information Service—b v**Public baths**

See Baths, Public

Public comfort stations

See also Newark, Public comfort stations

Public defender**Public health**

See also School hygiene

Public lands, U. S.—b v**Public libraries**

See Libraries

Public markets

See Markets

Public officers, Training of**Public records**

See Archives

Public schools**Public service commissions****Public service corporations—b v****Public utilities**

See Public service corporations

Public vehicles

See also Automobile law ; Motor vehicles

Public welfare**Publishers and publishing****Publishers' catalog****Pulmotor—t****Pure food laws**

See Food adulteration and inspection

Puritans**Publishers and publishing****Publishers' catalogs—j v****Pyle, H.—a****Pyrometers—t**

The Form of the Printed List of Headings

The entry words or subject headings are printed in small type in columns fourteen inches long, three inches wide and six columns to a sheet. The sheets are folded in the center and bound, with several blank pages at front and back. New subjects are entered in spaces at right of old ones, and on supplementary pages front and back. The type for these headings is held for the insertion of new subjects and the whole list as revised will soon be reprinted.

One or all the letters a. b. t. v. following any subject indicate that material on that subject is to be found in the art department, business branch, technical department of main or reference file. Headings which have no added letter are in the main or reference file only.

Arrangement of Material in Folders

Headings having been assigned, required new folders and "See" references made, the material is alphabetized. New folders receive the new material at once, new references fall into proper order, and the whole collection is ready for filing.

Items are arranged by sizes, the larger pieces being placed at the back of the folder and the smaller items and clippings in front. This prevents loss and makes use easier.

All pamphlets or broadsides are filed with the left margin down, except pamphlets which are short enough to stand in rows upright without obscuring the subject heading.

Clippings of special and probably permanent value are mounted on manila sheets 8" x 11", with a margin of 3-4 of an inch at left side. The margin is for punch holes by which several sheets on one subject may be tied together.

Bunches of clippings are avoided as far as possible. If many clippings are gathered within one folder they are classified into groups by date or by some other plan. This makes it much easier to find a needed clipping.

Use of the Material

Rules

Material is to be taken from the file, in folders and not by single

items, by members of Reference Department staff only, and is not to be replaced except by the assistant in charge of the file.

Folders which have been taken out are to be returned in alphabetical order, to a tray, 12" x 10" x 12", placed on a table near the files, until the assistant in charge can care for them.

Defects in alphabetizing, lack of cross references, lack of up-to-date material etc., noted in the course of filing or when using material, are to be reported in writing to the assistant in charge.

Revision of the File

General revision of the Vertical File is made in July and August of each year. Messengers are assigned to the work of examination of folders, with instructions to withdraw and place in separate piles according to the legends on them, all items bearing the date of the months prior to and including that in which the revision is being made. In July-Aug. 1915, for example, there will be withdrawn those which bear the legends "Bind Jl '15" or "Discard Jl '15". The assistant in charge of the file looks over these withdrawals for items which are of possible future or permanent value and these are redated and refilled; the remaining items are treated according to the legends.

Constant revision of the file is made as new material is added.

Duplicate, worn and superseded material is also withdrawn.

Preparation of Clippings

These rules have been formulated for treatment of clippings:

1. Indicate by a right-to-left-line the beginning and end of each article to be clipped. Wherever possible let this line be so drawn that it will not show after the cutting is made.
2. Indicate the subject heading by underscoring, or by writing it in. If this consists of more than one word, the first, i. e., the "filing" word, or a single line under the written word.
3. Stamp articles of only temporary value with some future date at which they may presumably be discarded.
4. Enter in ink at the beginning of each marked article the name, edition and date of the paper from which it is to be clipped, e. g., N. Y. Times, 28 '15.

5. Note whether columns coincide on both faces of marked sheets and whether marked articles and their continuations may be clipped without mutilating other marked articles. If found necessary, ask at once for a second copy of the paper, reserving these sheets of the marked copy until the duplicate is received and the necessary information copied.

6. When marked articles occupy more than one column and the continuations are printed in two column widths or other irregular sizes, liable to be torn in use, then, before cutting the paper, plan what margins should be left to put the clipping in proper and durable form without encroaching on other marked articles.

7. In cutting, follow the column lines. When possible leave margin at top of each article for stamping or writing subject heading.

8. Mount articles as indicated, under Arrangement of Material in Folders, p. 28 ; also other articles on manila sheets when so indicated.

9. Stamp all articles with the combination Library-Vertical File stamp in the upper right corner parallel with the top of the clipping. Mounted clippings should be stamped on the mounts.

10. Fold larger clippings to the size of the smaller leaf of the folder. Make the length-wise fold first, along the line of column divisions whenever possible, then so make the transverse fold as to leave the subject heading visible. Unnecessary folding is a waste of time, increases the wear on the clippings, makes the folders bunched and so lessens the capacity of the file.

11. For convenience in filing, arrange the clippings alphabetically in accordance with the underscoring of the subject headings.

Lending Vertical File Items

Duplicate copies of many choice items are often received. The treatment of them varies only in that the word "Lending" is stamped with a rubber stamp on the upper right corner ; also on back upper left corner of each piece, and that they are filed in folders in the proper sections of the vertical file called the Lending File.

The Lending File contains, in addition to the duplicates of the main file, thousands of clippings and excerpts from educational periodicals. Special effort has been made to collect holiday material, dialogues,

poems for special school occasions, blackboard designs, elementary science work, kindergarten busy work plans, and supplementary aids for teachers of all grades.

Clippings from newspapers, and other single sheet clippings are mounted on manila sheets as for the reference file. Items of two or more pages from magazines are placed in rugby paper covers, folded to 8" x 11" size, and clinched on the fold edge 1 1-2" from top and bottom of the booklet. The heading written on the clipping is written again on the outer face of the leaflet at the center, half an inch from the top, and the word "Lending" is stamped in upper right corner.

Mounting or protecting by outer covering is necessary for purposes of charging, for preservation of items for continued use, and also to indicate to borrowers that even clippings have a value.

Items from this file are lent as books are lent; any number to any one person, for one month, with a charge of two cents a day for each day overdue. For lost items five cents each is charged.

Instructions for Charging

- 1 Use manila slip of same size as book slips.
- 2 Write at the top V. F.
- 3 Date it.
- 4 Add card number of the borrower.
- 5 Below this write the number and subject of items lent; e. g., 3 Xmas, 2 Suffrage, 3 Newark Schools. Total, 8.
- 6 For subject names use the underscored words on items.
- 7 Date each item on the back upper left corner.
- 8 Add card number of the borrower.
- 9 Place all items in a manila envelope provided.
- 10 Date it on the "instruction legend", described in the paragraph below, and add the number of the items enclosed.
- 11 Date the reader's card and follow the date by legend "V. F." in pencil.

Instructions for Discharging

- 1 From the date on the face of the envelope find charged slips in the slip rack.

- 2 Compare the number of items returned with the number of items charged on the slip.
- 3 If all are returned drop the slip into the envelope and place it on the table at the left of the file.
- 4 If a number of those charged are not returned, make proper credits on the original slip and refile it, and,
- 5 Do not discharge the card.

Manila envelopes used for lending material are 12" x 9 3-4". About 50 envelopes are prepared in advance of use. The following legend, multigraphed on a separate slip 2" x 5" is pasted on each:

The Free Public Library of Newark, New Jersey.
Clippings, poems and leaflets are lent for one month.
For any lot not returned or renewed a fine of two cents a day for each lot will be charged. Please write your name on the package.

J. C. Dana, Librarian.

The Directory

The library's list of 1000 societies which publish literature, pamphlets chiefly on social questions of the day is called The Directory.

These societies are largely devoted to public welfare. Many of them issue books, journals, bulletins, leaflets or circulars, containing advice, suggestions, appeals, complaints, information and statistics on the work they cover. Taken together they tell of the infinity of forms in which the modern social revival, the "20th century renaissance of mutual aid among men", has shown itself.

Our list of these societies, kept in three trays of the Vertical File, is arranged alphabetically by names. Vertical File folders are used for the list. On the projecting edge of each folder, as a heading, is written the name and address of the society noted within. Below this heading a list is made of the subjects upon which literature can be secured from that society.

The Directory has been formed by noting the sources of incoming material and by follow-up requests for lists of publications or material descriptive of the purposes and activities of the several organizations.

A Subject Index to About Five Hundred Societies Which Issued

Publications Relating to Social Questions was published for the Library, December 1914 by The H. W. Wilson Co., White Plains, N. Y. The character of this list is here indicated.

The first of the two lists on p. 24 and 25 includes the subjects covered by fifty of the social service societies in our list. The second list on p. 25 includes ten of these societies.

Indexes to Current Information

Readers' Guide to Periodical Literature. Author and subject index to a selected list (90) of periodicals and composite books. Monthly. Annual cumulation. Five year cumulation. The H. W. Wilson Co., White Plains, N. Y.

Readers' Guide to Periodical Literature—Supplement. Index to general periodicals not included in the Reader's Guide. Five numbers a year. The H. W. Wilson Co., White Plains, N. Y.

Index to Legal Periodicals and Law Library Journal. Quarterly. The H. W. Wilson Co., White Plains, N. Y.

Industrial Arts Index. Five numbers a year. Annual cumulation. The H. W. Wilson Co., White Plains, N. Y.

Book Review Digest. Monthly cumulations. A digest of book reviews published in 55 periodicals. Class numbers assigned. Title index. Annual cumulation. The H. W. Wilson Co., White Plains, N. Y.

Cumulative Book Index. Author, title, and subject catalog of books published. Bi-monthly. Annual cumulations. The H. W. Wilson Co., White Plains, N. Y.

Public Affairs Information Service. A coöperative clearing house of public affairs information, published for coöperating institutions by The H. W. Wilson Co., White Plains, N. Y. Weekly. Bi-monthly and semi-annual cumulations. It covers the following sources of information: State legislative studies, municipal studies, court decisions, proceedings of international, national and state organizations, civic, social and bar associations, legislative, municipal reference bureaus.

Information: a digest of current events, monthly with quarterly cumulation. R. R. Bowker Co., New York. It is planned primarily

for students and readers of the press as a continuous encyclopedia of history in the making.

Annual Magazine Subject Index ; including The Dramatic Index .
Ed. by F. W. Faxon. The Boston Book Co.

The New York Times Index ; a master key to all newspapers.
Quarterly. New York Times Publishing Co.

Monthly List of State Publications. Library of Congress, Washington, D. C.

Monthly Catalogue of United States Public Documents. Issued by the Superintendent of Documents, Washington.

Index of Mining Engineering Literature. Annual. J. Wiley & Sons, New York City.

Engineering Index. Review of the Engineering Press. Monthly.
Annual cumulation. Engineering Magazine Co., New York City.

Modern American Library Economy Series

Edited by John Cotton Dana

Volume I

- Registration Desk. (Out of print except in bound volumes.)
Charging System, 50c.
Administration of Lending Dept., 50c.
Relations with Public in the Lending Dept., 50c.
Booklists and Other Library Publications, 50c.
Business Branch, \$1.00
Advertising, 50c.
School Dept. Room, 50c.
Course of Study for Normal School Pupils on the Use of a Library.
(Out of print except in bound volume.) See Vol. 2, How to Use a Library.
Picture Collection. (First edition out of print. Revised and enlarged edition now ready, See Vol. 2).
Work with Schools, School Libraries, 50c.
Course of Study for Normal Schools on Literature for Children, \$1.00
Large Pictures, Educational and Decorative, \$1.00
"Large Pictures" completes the first volume of the Series. This volume may be secured bound in three-quarters pig-skin for \$12

Volume II

- High School Branch of the Public Library, 50c,
Maps, Atlases and Geographical Publications, 75c.
The Vertical File, 50c.
How to Use a Library ; a Course of Study. In paper \$1. bound \$1.30
Aids in High School Teaching ; Pictures and Objects, \$1.00
The Picture Collection, Revised. In paper \$1. bound, \$1.30
List of Subject Headings for Information File formerly called Vertical File ; see pamphlet by that title above. \$1.00 In press.
Filing System by Colored Bands, \$1.00 In press.
Management of Branch Libraries, \$1.00 In press.
Note: Aids in High School Teaching is wrongly paged bearing the same pagination as How to Use a Library which properly follows in its pagination the Vertical File.
Several other pamphlets are in preparation.

Modern American Library Economy As Illustrated by the Newark N. J. Free Public Library

By John Cotton Dana

How To Use a Library : A Course of Study

*For Those Who Wish Instruction that will
Help Them to Help Themselves, their
Pupils or their Children.*

*Written for Normal classes, High School classes,
Librarians, and all others interested.*

By Louise Connolly.

Published by
The Elm Tree Press Woodstock Vermont
1917

NOTE OF EXPLANATION

In 1910 a "Course of Study for Normal School Pupils on the Use of a Library", by Marjarie L. Gilson, was printed as part of American Library Economy. This course was prepared when the Newark Library arranged with the Newark Normal School to give a course of instruction to the students in the use of the library. At that time there was nothing of this nature in print.

In a note of explanation to this pamphlet, Miss Gilson says: "In November, 1904, the first attempt to teach the use of a library in this city was made with a class of eighth grade pupils. Three groups of eleven children each were given instruction, one hour a week, on the arrangement of books by classes, on the use of the card catalog and kindred topics. Upon the foundation which this experience gave were built the present twelve lessons, all being tested by actual trial from week to week and from year to year."

"The course is intended as an elementary introduction to the use of a library and books, for young people in general; but chiefly for normal school pupils, library apprentice classes, and high school pupils. For more advanced work this course should be supplemented by extended studies in the use of reference books, children's literature, organization and management of school libraries and other topics."

This course was used with success with classes from the Newark Normal School. It was a required subject in the school curriculum, and due credit was given on completion of the course.

An edition of 1000 copies and another of 500 copies were both soon disposed of and many requests were not filled.

The present publication is not a revision of this course, although based upon it. It is written for normal classes, high school classes and librarians. It is addressed also to a wider range of students, to men and women who wish to inform themselves in the methods of gaining book knowledge, to their pupils or their children. It was prepared by

an expert in the science of learning and teaching, and we believe it is simple enough to be used by untrained readers.

When Melvil Dewey founded the first library school he knew that there was a growing science called education, and a developing art of instruction, and he paid to it the courtesy due from one specialist to another. Said he, "Object teaching will be used wherever possible" * * "The blackboard will be freely used" * * "The problem method * * * will test the proficiency of the student." Then he gave the steps by which he would proceed, 1 Lecture, 2 Reading, 3 Seminar, 4 Problem, 5 Work in work room, 6 Visits to other libraries.

It is not surprising that Mr. Dewey believed the Object Method to be satisfied when objects were shown. No man can be expected to be so thoroughly informed as he was in his own specialty and equally well informed in even a kindred subject. Object teaching, as understood by the average teacher, does not mean an illustrated lecture followed by reading and tested by a problem; it means inductive teaching wherein objects are observed, experiments are made, principles are developed and formulated, and application follows. But even Pestalozzi, who knew very well, theoretically, the place of experience, frequently in practice began with words about objects. The tendency is human.

The author of this book has made a slight digression from the way marked out by Dewey, and pretty closely followed by most modern library schools. The pupil is here induced to find out a good deal about each subject of investigation by the performance of certain exercises. It is suggested that he make and formulate his own summaries; but he can test their correctness by reading them ready-made, and he can get bits of related information which he could not have found out for himself. His grip on these things is tested by an application demanding the use of the skill thus acquired.

There are also a few devices suggested by the use of which time and energy in class administration may be saved.

The trained teacher will find here no attempt to present any perfect "lesson wholes." The trained librarian may consider the exercises unnecessarily minute and simple. Both are at liberty to exercise liberty in teaching. Individual students who wish through these exercises to

train themselves in the use of library tools will need to take occasional test exercises to some friend in the reference room for judgment. That is to say, because the book can be used by several classes of students it fails to fit any class perfectly.

To be logically complete it should end with a number of subjects of wide range in the study of which students can apply all that has been learned. But no real student will need such artificial stimuli. The world is full of work, and there can hardly be found any field of labor in which the performer will not be advantaged by study demanding the skill which this book should cause its readers to acquire.

J. C. D.

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LIST OF ILLUSTRATIONS

Notes made on cards of information found in different books on a subject being investigated. Page 11

Labels used on drawers containing catalog cards. Cards are alphabetized by the first word appearing on each card, and the labels show between what letters the contents of the drawers run. Page 14

Three sample catalog cards showing forms of author, title and subject cards. These cards are filed alphabetically in the catalog drawers by the first word on the card,—author, title or subject. Page 20

Three more sample cards showing (1) Form of subject card for portion of a book. This is an "analytical." (2) Biography subject card. (3) Author card for collective biography. Page 21

Sample cards showing (1) Form of a reference from one subject to other related subjects. (2) Reference from a pseudonym to the real name. (3) Author card for autobiography. Page 22

PREFACE

Into every library many people come for information on many subjects. Few of these people can find the information which they seek, without help.

This pamphlet was at first addressed to normal students, but has been revised so that any class of students or any individual visitor to a library may profit by it. It is still, however, especially intended for normal, high school, and college classes, parents, teachers, and for young people—that is, for people who are themselves learners or guardians of those who learn.

Look over the table of contents on page 3, select the subject on which you need enlightenment or practice, and perform the first exercise therein suggested. The “summary” which follows gives information showing whether your answers are correct. If you do not belong to a class on library use, any librarian will gladly assist you with advice, or will revise your work.

If you do belong to a class, prepare so much of the written work demanded by the second exercise under each chapter, as you have the means to do.

It should not be the business of a text-book of this description to teach adults how to take notes. But many of the things which are most vital to success in life are never known by many people, because they form no part of any curriculum. So to the library come many people looking for information who have never been trained either to take notes or to use them. Both children and adults copy whole sentences and whole paragraphs, when a phrase, or even a word, would do, and make note of unessentials while neglecting essentials. And many books, written by specialists, fail to state facts clearly because their authors do not know how to sift and arrange material.

Suppose you look in several books for information about George Washington’s birth and the conditions of his childhood. These are the results, in notes:

a "G. W., 1st pres. U. S., b. Westmoreland Co., Va., Feb. 22, 1732. House of b. in parish called Wash., near Pape's Creek, trib. Potomac. Fire in G's boyhood; 1815 stone on site by G. W. Custis."

b "G. W., illustrious Am. gen'l b. on Potomac R. Son Augustine W., planter, and 2d wife, Mary Ball."

c "G. W., b. at Bridge's Creek, Va., Mary Ball father's 2d w. had 4 sons & 2 daugh. G. oldest. At 11 yrs. father died. 1st wife, 3 sons & 1 daugh."

d "G. W., father's 5th child. 3 generations before him lived in Am. Well-to-do planter died, so G. couldn't have Eng. ed. like bros."

You have used abbreviations instead of words, and words or phrases instead of sentences. As you read one authority after another, you have omitted noting from the later read what you remember to have noted from the earlier read.

As you write your own statement, you cull from each and all of these batches of notes, with your pencil crossing out what you have used, trying to put items in correct sequence, and avoiding the twice telling of anything. Thus, you write:

"George Washington, the most illustrious American in history, was an American of the fourth generation. His people were upper class Virginia planters, the kind that sent their sons, at least, back to England to be educated. They lived, at the time of George's birth, at a place called Bridge's Creek, on a branch of the Potomac called Pape's Creek, in a house that burned during George's boyhood, but the site of which was marked soon after his death.

"He had three older half brothers, all of whom received English educations, but his father, Augustine Washington, died when George was eleven years old, leaving his second wife, with her children, of whom George was the eldest, in no condition, financially, to indulge in luxuries, so George lacked a gentleman's schooling, although he had a gentleman's social training."

Notice what has been omitted, and how sequences have been changed. If notes are written clearly, on small sheets, if each sheet bears some cabalistic label in one corner showing from what book it was taken, and some other such label in another corner, showing what

topic it deals with, it is easy to sort the notes by topics for use and to put them back again, according to sources, for filing or for future use.

<p>Ch. S.W. <i>W. Westmoreland Co. Va. Feb 22, 1732</i> House of birth in parish called Wash., near Pope's Creek, trib. Potomac. First in B's boyhood 1815. Stone on site by S. W. Parks Custis. Am. C.</p>	<p>Ch. S.W. b on Potomac R Son Augustus W., planter, and 2d wife, Mary Ball.</p>
<p>Ch. S.W. b at Bridges Creek, Mary Ball father's 2d w. had 4 sons + 2 daugh. 3 oldest, at 11 yrs father died - 1st wife, 3 sons 1 daugh. Not. Am.</p>	<p>Ch. S.W. father's 5th child. 3 generations before him lived in Am. Wash. to-day planter died so B. couldn't have Eng. ed. like bro. L. B. D. En. Am.</p>

Thus the four cards bearing the notes given above were labeled as here shown. All of them are about George Washington, as is shown in their upper right corners; all are about his childhood, as their upper left corners indicate; the first is from the American Cyclopaedia, the second from Lippincott's Biographical Dictionary, the third from Notable Americans, and the fourth from the Encyclopedia Americana, as is shown in the lower left corner of each. Six months, or six years after making these notes you can use them or refer to them. They will always be intelligible and verifiable.

If you have so many subjects on hand that G. W. might mean one of several things, use Geo. Wash. If you are unfamiliar with reference books, enlarge Am. C. to Ameri. Cycl., and for L. B. D. use Lipp. That is, season your system with good sense and run no risk of being unable to read your own notes.

All students work out little systems of this sort. Those who are not students, but only occasional searchers often lose labor for lack of such a system. This is suggested merely as a system, and it is placed in the preface that those who so wish may employ it in the lessons which follow.

How to Use a Library

A Course of Study

Chapter I

How to Use the Card Catalog

If you enter a library to look for a book on some subject which interests you, or to look at books by a certain author, you need to know how to use the catalog.

Most libraries list their books on cards in a "card catalog." The cards are in drawers, are arranged alphabetically from front to back; and the drawers are labeled to show between what letters their contents run.

REFORM - RELIGION
RELIGION - REMN
REMON - RET

The first word in this drawer is *Reform*
The last word in this drawer is *Religion*

The first word in this drawer is *Religion*
The last word in this drawer is *Remnant*

The first word in this drawer is *Remon-*
strance
The last word in this drawer is *Return*

If you want a book whose title begins with the word *reform*, in which drawer will you look? If the first important word of the title were *religion*, how many drawers might you have to use? It is sometimes necessary in order to have the proper number of cards in each drawer, to divide the cards on one subject, as in the case of *religion*. But usually a drawer contains words from one group of letters to the other inclusive.

The subject of alphabetical arrangement is thoroughly taught in the chapter of this book devoted to the encyclopedia.

Exercise I For Anyone's Use in Learning the Facts
from Observation

If you are in a library, borrow a drawer from the catalog to use while doing this exercise. If not, use the illustrations Fig 1 — Fig 9 inclusive.

Select several cards on which the line at the top gives the name of an *author*. Does each card give the title of more than one book? The names of other books by this author are on other cards. Find a card on which the top line gives the *title* of a book. What is the chief other item told by this card? What two other items are given on both the *author* card and *title* card? Which card is the fuller, the *author* card or the *title* card? Which card gives a *subtitle*? What is the use of the *subtitle*? Which card gives the publisher's name? Which gives the number of pages? What might be the value of mentioning on a card that a book is illustrated? Find a card that does mention this fact. Under what circumstances would it be valuable to a reader for the card to contain the contents, as in Fig 6?

Find a card on which the first line gives neither the author nor the title of the book represented. What does it give? On this *subject* card, what other items are given? Which is placed first?

Find a *subject* card which refers you to another subject heading for authors and titles.

According to these cards, are the titles of the books by an author given under the author's pseudonym or under his real name? What is a pseudonym? A nom de plume? See dictionary. Is an author's first name or surname placed first? In writing an author card, how is his name punctuated? When you wish to know an author's full name, for what card do you look? How is his name treated on the subject and title cards?

What three kinds of cards, according to the examples we have dealt with, does a card catalog contain? How many cards, then, may there be representing a book in the library?

This is not true of fiction, since it is not always true that a novel or story deals with any one subject.

Compare Figs 1, 2 and 3. They are three cards representing one book. What is the book? What is its number? This is the "call

number " of the book ; that is, it is the number to be used in calling this particular book. What letter is contained in this call number ? Compare with Fig 4. From what is the letter in a call number probably derived ?

In Fig 9 for what does B stand ? Sh might stand for one of two things. Compare with Fig 5. For what does it stand ? Compare Figs 4 and 6. What is used for the call number of a collection of biographies ?

The name " call number " was given to the number allotted to a book at a time when in all large libraries the person borrowing a book asked for it at a desk, giving its number, and received it from the hands of the librarian. At present, some libraries continue this practice, the borrowers literally " calling " for each book by number. But many modern libraries employ what is called the " open shelf " system. In this system each borrower looks for the number of the book which he wants, by title, or subject, or author, as the case may be, goes to the shelves and helps himself. Knowledge of the call number is generally a great aid in finding a book on the shelf.

Moreover, if a book is to be taken from the library, the librarian at the desk " charges " it on the book-slip which is arranged with other book-slips, by its call number, and not by its title.

Exercise II For Classes Using this Book

The teacher gives to each student a slip containing the title of a book.

1 Who wrote (Let the teacher supply a title)

Find and copy the author's name, also the call number.

2 What other books written by the same author are in the library ? Copy the call numbers of the first two you find.

3 Are there any accounts of the life of the authors of these books in the library ? If there are, copy the call number of one of them.

4 Give author, brief title and call number of two books on any one of the following subjects, noting the subject chosen : Chemistry, Kindergarten, Playground, School gardens, Basketry, Manual training, Nature study, Arithmetic, Geography, Psychology, Education, Folk dancing.

5 Give author, brief title and date of two of the most recent books the library has on any one branch of natural science, noting the branch chosen.

6 Name two books in the library by any one of the following: Mark Twain, Charles Egbert Craddock, Anthony Hope, George Eliot, George Sand, noting the author chosen.

7 Look up one of the following subjects: Electricity, Education, Science, Botany, Literature, Physiology, Flowers, Food. Find a card which will refer you to other subjects under which you would find material allied to this subject which you are investigating. Mention three of these subjects, noting with which subject here mentioned they are allied.

Summary of Information Contained in this Chapter

The Catalog, an Index to the Books

Every book in the library is represented in the catalog by two or more cards. These cards are placed in drawers in cases and are so arranged that, if read in order, the entries on them are found to be alphabetized like those in a dictionary or encyclopedia. Cards are read from the front of the drawers toward the back. Drawers are so lettered that one may refer at once to any required division of the alphabet.

The catalog answers three questions: What books by a certain author are in the library? Who wrote a book by a given title? and, What books on a given subject are in the library?

The Author Card, Fig 1, answers the question, What books by a certain author are in the library. Author's surname followed by his given name is on the first line. On the next line is the title of the book followed by such information about it as the number of pages, size, place of publication, date, etc. In the upper left corner is the book or call number.

The Title Card, Fig 2, answers the question, Has the library a book by a given title? The title of the book, omitting the initial article, is on the first line of the card. The author's surname, followed

by his given name, is on the second line. The call number of the book is in the upper left corner.

The Subject Cards, Fig 3, show what books on a given subject are in the library. The subject of any given book is on the first line. The author is on the second line. The title is on the third line. The call number is in the upper left corner. Books treating of several subjects frequently have more than one subject card.

A Biography Card is a subject card made for biography Fig. 5. The surname of the subject of the life, followed by the given name, is on the first line. If the book treats of the lives of several people, Fig 6, a subject card for each person is made, Fig 4.

Each card mentioned bears in the upper left corner the call number of the book it refers to. By means of this the location of the book on the shelves is known.

Further Information Given by the Catalog. Frequently by means of a reference card, Fig 7, more material on a given subject is suggested. This card is filed after others having the same subject heading.

Books are entered under the author's real name. A card, Fig 8, is filed under the pseudonym, or nom de plume, referring to the real name.

When an author has edited a book, "ed" appears after his name. If he has written a book with another person, "joint authors" appears after their names.

Note for Teacher of a Class

The first lesson given in this course should begin where the pupils' interest lies, and be of practical value. From this time on your pupils will use what they have here learned, if you, and teachers of content subjects, demand it.

Order of the Lesson

(A) Have such of the following questions as are suitable answered in writing :

- 1 How much have you used this library ?
- 2 What for ?
- 3 What other libraries have you visited ?

- 4 For what purpose ?
- 5 What is a reference book ?
- 6 With how many reference books are you familiar ?
- 7 Name a few of them.
- 8 In what courses of your high school was it necessary for you to use reference books ? Did you use any reference books during your grammar school years ? If so, what ?
- 9 Have you had any need to use reference books outside of your school work ? If so, what ?
- 10 What book or books read in your childhood did the most good ? Most harm ?
- 11 What book or books gave you the most pleasure ?
- 12 From what book or books did you gain most knowledge ?
- 13 What are the books that you like best now ?
- 14 Do you still read children's books ? If so, why ? If so, what ?
- 15 Do you read newspapers ? How much ? What papers ? What pages ?
- 16 Do you read magazines ? If so, which ?
- 17 Name the last four books that you read of your own volition.
- 18 Are you careful or careless in your treatment of books ? Why ?
- 19 Do you own any books ? Do you wish to own books ? Why, or why not ?
- 20 Write a few paragraphs, expressing your views on illustrations in books.

(The teacher should preserve these papers to compare with the answers to test questions at the end of the course, and for reference during the course.)

(B) Give Exercise I, orally, making careful note of the intelligence of individual pupils.

If the class is large, a good way to do this is to have an alphabetical

list of the pupils before you, divided by vertical lines into spaces, each space for a lesson, thus :

	Oct. 1	Oct. 2	Oct. 3	
C. Adams	• C			
G. Burt	• • O			
R. Cuthbert	• • • L			

Every time Adams talks, put a dot in the proper date opposite his name. On October 1, Adams talked once, Burt twice, Cuthbert three times. At the end of the hour, set down opposite each name a mark indicating the kind of intelligence shown. Adams talked once, but very well; Burt twice, but foolishly; Cuthbert three times, with only fair intelligence. If the school authorities demand percentage reports, these data will help you to give them a fair rating. If not you will soon be able to drop the signs as you learn to know the pupils, but the dots will help you to see that every pupil gets a fair chance. You will later use the dots only opposite the names of students whom you are apt not to call upon, and eventually they too may cease.

(This note is particularly addressed to librarians who are compelled to teach without knowing either principles or practice of instruction.)

(C) Assign Exercise II to be brought in written for the next lesson.

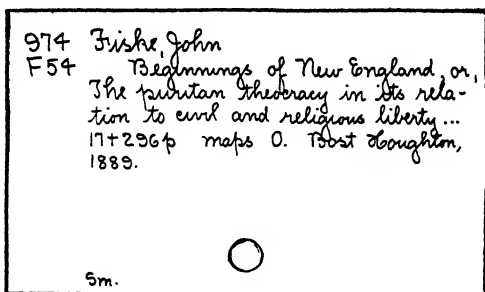


Fig 1

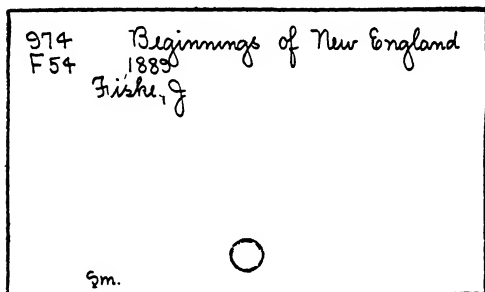


Fig 2

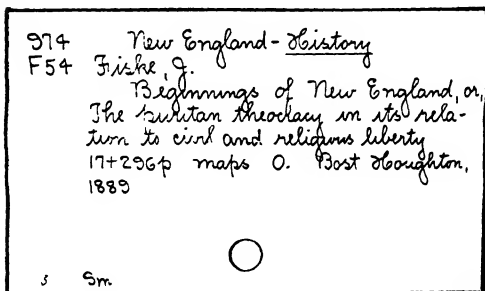


Fig 3

Catalog cards on this and the two following pages are reduced.
 The size of originals is 3 x 5 inches.

	Lincoln, Abraham, 16th pres. of the U.S. 1809-1865
920 B6319	Bolton, Mrs. S. & (K) Abraham Lincoln (see Bolton, Mrs. S. & (K), Lives of poor boys, p 342-367)
Sm.	

Fig 4

	Lincoln, Abraham, 16th pres. of the U.S. 1809-1865.
B L63122	Nicolas, Helen Boys' life of Abraham Lincoln with ill. by Jaly Hambridge and others. 8+307 p. ill. D. N. Y. Century. 1906.
Sm.	

Fig 5

920 H872	Houlbert, Archer Butler Pilots of the Republic, the romance of the pioneer promoter in the Middle West 368 p. illus. Chic. McElurg, 1906 Contents Washington Richard O. Anderson
Sm.	○ See next card

Fig 6

The vertical and horizontal lines on Figs 4, 5, 7, and 8 simply show what arrangements are made on the cards themselves for indention.

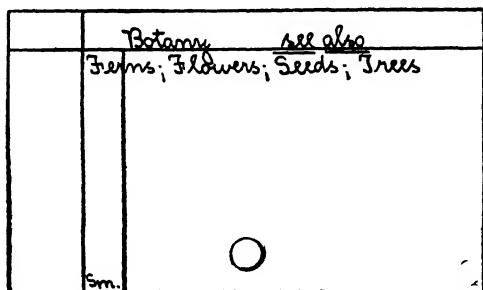


Fig 7

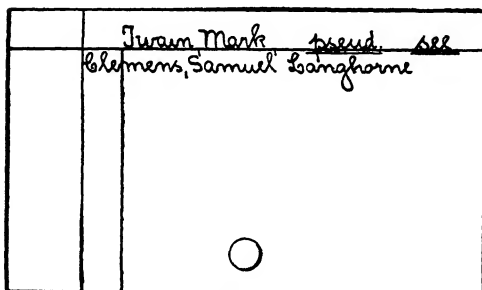


Fig 8

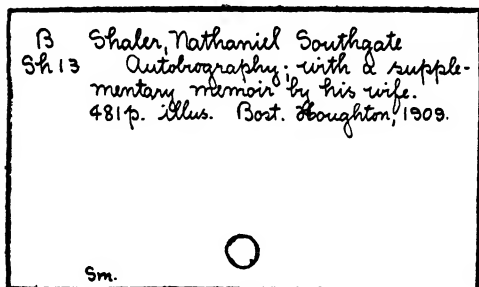


Fig 9

These three cuts complete the series of nine showing the various points about cataloging which it is important to understand.

Chapter 2

How Books are Classified

The newly rich gentleman ordered that his books should be arranged on the shelves, "The big books at the bottom, and the smaller above." The artistic housekeeper refused to allow a book in her library because of its color — "The red books are kept in the pool room."

Most libraries are arranged according to both subject and literary form.

Exercise III For Anyone's Use in Learning the Facts from Observation

Make a list of classes of books according to subject, as history, geography, etc. Run through a catalog drawer and find a book that does not belong under any of your headings. According to its literary form, a book may be poetry, essay, etc. Continue your list. Then again look through a catalog until you find a book that does not belong under any of your headings. It is not easy, as you will see, to make a list of classes covering every book that can be printed.

Dr. Melvil Dewey has made a most successful classification of all literature. His is called the Dewey System. It is not difficult, given a set of class numbers covering all his classes, to understand his system. Here is such a list:

Main Classes of Books

130 Mind Cure	914 Travels in Europe
204 Household of Faith	946 Builders of Spain
301 Introduction to Sociology	891 Bohemian Literature
407 Teaching the Language	520 History of Astronomy
Arts	465 Practical Spanish
500 Scientific Ideas of Today	220 Holy Bible
621 Machine Design	192 Philosophy of Francis
792 The English Stage	Bacon

820 English Prose	824 Essays in Fallacy
901 The Interpretation of History	783 Choirs and Choir Music
070 English Newspapers	656 Practical Seamanship
251 Making of Sermons	658 Salesmanship
485 Greek Grammar	320 Elements of Politics
690 Building Construction	361 Red Cross Society
816 Letters, Curtis and Dwight	170 Ethics
150 Psychology	025 Library Primer
398 The Age of Chivalry	971 The Canadian Questions
570 General Biology	297 Teachings of Mohammed
759 Oriental Painting	730 Florentine Sculptors
	428 Words and their Uses
	598 Handbook of Birds

Name from this list a book on religion; another; another. Write the class numbers of these books. What is the subject covered by class numbers 200-299?

Write the subjects covered by 500-599; 900-999; 100-199.

Compare the 600's and 700's. What is the difference between them? We call these two divisions of art the useful arts and the fine arts. What are the 600's? The 700's?

Suggest a name for the subject included under the 300's; the 400's; the 800's.

There are some kinds of books not included in the above list, as encyclopedias. Such books are called general works. How are they classified?

Set down in order the ten great classes into which the Dewey system divides literature. Compare with the table on page 23.

Books marked 900-999 inclusive treat of history. Examine the following list:

932 History of Ancient Egypt	937 History of Ancient Rome
935 Babylon and Assyria	943 Holy Roman Empire
941 Wars of Scotland	944 French History
966 Liberia	956 Palestine Today
968 Wars of South Africa	948 The Norse Kings
958 Russia in Central Asia	938 Greeks and Servians

945 The Kingdom of Naples	940 Modern Europe
934 Ancient India	953 History of Saracens
962 Modern Egypt	951 China's Story
933 History of the Jews	949 Rise of Netherlands
942 English History	955 Modern Persia
959 Burma and the British	946 Builders of Spain
967 Congo Free State	

What class numbers treat of ancient history? Of the history of Europe? Of what do 950-959 treat? 960-969?

All books bearing the class number 973 treat of United States history. Examine the following list:

- 973.1 F54 Discovery of America. Fiske.
- 973.2 F54 Dutch and Quaker Colonies in America. Fiske.
- 973.2 B44 Germans of Colonial Days. Bittinger.
- 973.2 D77 The Middle Colonies. Doyle.
- 973.3 B17 Itinerary of Washington. Baker.
- 973.2 T27 Some Colonial Homesteads. Terhune.
- 973.5 W15 Jackson and New Orleans. Walker.
- 973.6 R48 War with Mexico. Ripley.
- 973.7 B91 Civil War and the Constitution. Burgess.
- 973.7 B82 Secession. Brownlow.
- 973.8 Sa7 Campaign of Santiago de Cuba. Sargeant.
- 973.8 M61 Expedition to the Philippines. Millet.

Of what period in our history does 973.1 treat? 973.8? 973.7? What decimal indicates the period of Colonial life? The Revolutionary period?

Find in the catalog, or from books provided by the librarian, the call numbers of several biographies of individuals, and several collective biographies, and notice how each class is numbered. Under which of the ten main classes are biographies found?

Exercise IV For Classes Using this Book

Select 20 cards from the card catalog at random, and see how much of each call number you can explain. The numbers after the letters you need not be able to explain. Only the cataloger knows

how to place them. He gets them from tables made up by C. A. Cutter, called the Cutter Tables.

Set down five call numbers and write your explanation of so much as you can understand by looking at the titles on the shelves in a library. For instance,

371 D72 Place of Industries in Elementary Education, by Dopp.

300's = Sociology

370's = Education

371's = Industrial Education

D72 = This book by Dopp according to Cutter Tables

(Another book by Dopp might be D721)

396.3 Su6 = Equal Suffrage, by Sumner

300's = Sociology

390's = Customs etc.

396's = Customs about Women

396.3 = Woman Suffrage

Su6 = This book by Sumner according to Cutter Tables

Summary of Information in this Chapter

Books in a library are usually grouped together according to a system of classification. In large American libraries this is generally the Dewey System. This system divides books into ten groups which are represented by figures as follows for convenience in arranging and marking :

000-099 General works, that is, books which treat of many subjects and cannot be placed in any one group : encyclopedias, bound magazines, etc.

100-199 Philosophy, for example : Spencer, Synthetic philosophy

200-299 Religion, for example : Moulton, Modern reader's Bible—Psalms

300-399 Sociology, for example : Dawes, How we are governed

400-499 Language, for example : Harkness, Latin grammar

500-599 Science, for example : Shaler, Outlines of the earth's history

-
- | | |
|---------|---|
| 600-699 | Useful arts, for example: Century cook-book |
| 700-799 | Fine arts, for example: Goodyear, History of art |
| 800-899 | Literature, for example: Irving, Sketch book; Long-fellow, Poems |
| 900-999 | History, for example: Winsor, Narrative and critical history of the United States; Carlyle, French Revolution |

These ten large groups are in turn subdivided so that books on more limited subjects may stand together. For example, in the group history represented by 900, 930 stands for ancient history; 940, history of Europe; 950, history of Asia, etc. Further sub-divisions may be made, where necessary, by means of the decimal point: 973, U. S. histories; other U. S. histories by periods: 973.1, histories about discovery; 973.2, the Colonial era; 973.3, the Revolution, etc.

Books bearing the same class number are distinguished from one another by the surnames of the authors, indicated by letters and figures, according to the Cutter Tables.

Note for Teacher of a Class

The fact that a book found in the catalog is distinguished by a call number leads to the inquiry, From what is this call number derived? That question is answered in this lesson.

Order of the Lesson

- (A) Have Exercise II collected.
- (B) Perform Exercise III orally, with books open, noting carefully the intelligence of each pupil, as suggested on p. 19.
- (C) Assign Exercise IV to be brought in written for next lesson.

Chapter 3

How to find a Book on the Shelves

When a visitor to a library, having a definite purpose, has looked through the card catalog for the books or parts of books that he wishes, and has copied the call numbers of such books, he needs next to know how to find the books on the shelves. Some libraries keep

floor plans of their departments in conspicuous places, so that it is not even necessary to ask the librarians, "Where are the 100's?" or, "Where is Philosophy?" In other libraries the locations of subjects must be learned by experience.

Theoretically, each book has one place in the library. In fact, one need not be discouraged on failing to find a book in its proper place.

Let us suppose that in the Newark Library Uncle Tom's Cabin is called for. It belongs in the Fiction Room, at the end of the Stowe stories. If that copy is out, try the Children's Room. If that is gone, there may be a set of Stowe books kept intact, in the North Gallery where fine editions are shelved. That copy is probably not lent, and should therefore be on the shelf. But if not, suggest that you are in great and immediate need of a quotation from the book, and an assistant may ask if it is in the Mending Room. If not, perhaps, the number of copies having run low, there is a new one in the Catalog Room not yet in circulation, but ready. All else failing, there are perhaps branch libraries to which you can telephone, or a neighboring town may lend a copy through your own city library. It is seldom necessary, where good libraries abound, to despair of filling a real need for a standard work. Many standard works, bearing the letter R, are among the reference books. They may be read, but not borrowed.

Do not be content with a floor plan. Make a pilgrimage about the whole building, securing a guide to the parts not usually open, and collecting a party of friends if guides are not furnished to individuals. Only so can you learn well the resources of the institution.

Exercise V For Anyone's Use in Learning the Facts from Observation

(A) Write the following imaginary call numbers on separate slips of paper, arrange them in sequence, and write them in new columns as the books they are supposed to represent should follow each other on the shelves. When in doubt, study the real books in some department of the library.

369.1 Ab42	369.1 Ash21	372 H36
412 W65	369.12 Ar4	370 A14
369.2 Su7	369.1 Ab43	
380 A17	369.11 St32	

(B) Visit the Fiction Room and write a statement of the manner in which novels are arranged in this library.

Exercise VI For Classes Using this Book

Find on the shelves the following books. In each book place a slip of paper bearing your name and turn the book down on the shelf. Check the book on this list. If the book sought is not in, turn down the book standing next to the place where it should have been :

Fiske. American political ideas	320 F541
Higginson. Larger history of the United States	973 H531
Lodge. Life of Cardinal Richelieu	B R394
Whitney. On snow-shoes to the barren ground	917.1 W61
Longfellow. Poems	811 L861
Thompson. Wild animals I have known	590 T37
Wentworth. Arithmetic	511 W4811
Dickens. Little Dorrit	
Fenelon. Selections	244 F3511

Summary of Information in this Chapter

Each book in the library has a call number. A copy of the book, bearing this number may, in a large library, be in one of several places. Books are grouped in sequence according to their call numbers.

Each shelf reads from left to right; each tier of shelves from top to bottom; each case from left to right: and each corner should be turned to the right, facing the shelves.

The sequence of books follows: first, numerical sequence of the Dewey classification numbers; second, alphabetic sequence of author's name; third, numerical sequence of Cutter Table numbers. But fiction is usually arranged first alphabetically by author, and second alphabetically by title. And biographies are arranged first alphabetically by subject, and second numerically by Cutter numbers.

Note for Teacher of Class

This is the third lesson in a group of three, meeting the first needs of most library users. There should be much individual work done in these lessons, and if you can induce any library to allow each student to spend in it several hours as messenger, or, better still, if you can demand that each student induct one or more lower class students into the use of what has been learned, the knowledge will be clinched

as it can be in no other way. If these lessons are given to seniors, let each senior teach one or more juniors, using the text-book, and report on their proficiency. The lessons can then be omitted next term, the former juniors teaching their successors. A test may be given to insure thoroughness.

Order of the Lesson

(A) Make a tour of the library, noting all its departments and resources.

(B) Have Exercise IV passed and corrected.

A Plan for Passing Papers for Class Correction

A	x	x	x	x	x ^s
B	x	x	x	x	x
C	x	x	x	x	x
D	o x	x	x	x	x
	1	2	3	4	5

1 Cause all papers in Row D to be passed forward to Row A. Each pupil in Row A then has two papers.

2 Cause each pupil in Rows A, B, C to pass his paper to the pupil behind him.

Or, 1 Cause all papers in Line 1 to be passed to Line 5. Each pupil in Line 5 then has two papers.

2 Cause each pupil in lines 2, 3, 4, 5 to pass his paper to the left.

To make a variation on these plans, they may be reversed, or both methods may be used, thus putting the paper of the pupil sitting where the o is into the hands of the pupil sitting where s is.

Papers should be doubly signed:

Written by

Corrected by

and collected and re-examined by the teacher.

(C) Read the introduction to Exercise V, and perform the exercise orally. Have Exercise V B read aloud by various pupils.

(D) Assign Exercise VI to be done for next lesson.

Chapter 4

How to Choose the Right Book

In a large library the inexperienced person is often overwhelmed, finding more material than he can use to advantage. The card catalog may offer 40 books on his subject, several of them consisting of more than one volume. To examine all these books would be burdensome, and is generally unnecessary.

There are many points that can be discovered about a book without reading it.

Exercise VII For Anyone's Use in Learning the Facts
from Observation

Suppose the subject to be *The Cause of the Tides*, and that it is to be presented to children 13 or 14 years of age. The first six cards in the catalog may be:

- 1 525.6 B21 Ball, Sir R. S. *Time and tide, a romance of the moon.* 1888
- 2 627 H91 Hunter, W. H. *Rivers and estuaries; or, Streams and tides: an elementary study.* 1913
- 3 527 P79 Poor, C. L. *Nautical science in its relation to practical navigation.* 1910
- 4 551 T39 Thornton, John. *Tides.* (In his *Advanced Physiography*)
- 5 252 D86 Dudley, J. L. *Tides and tendencies.*
- 6 Smith, F. H. *Tides of Barnegat.*

Compare the books of Ball and Hunter as to dates of publication. Which is certainly valueless because its information is out of date?

Were the subject *Costume*, the first card found might be:

- 391 B76 Bridgens, R. *Illustrations of manners and costumes of France, Switzerland and Italy; 50 plates, finely colored, with descriptions.* 1835

Is this also useless because published so long ago? Why?

Read the subtitle of the Ball book. Look at the call number of the book. Is it really a romance in the usual sense of the word? Why is

it so called? Which of the books on tides is really a novel? Is it probably worth while to read it for information on the causes of tides? Is Poor's book a recent publication? Remember that you can tell from the date of publication not when it was written, but only when it was published. Do you think, from the title, that this book will meet your needs? Why?

Which of these books is evidently a book on figurative, not literal, tides, and hence not useful for your purpose? How does its call number show this? Which of the remaining books will be too "grown up" for your use?

How many of the six books under *tides* have you rejected without going to the shelves at all? Which will you examine in the hope that it may serve your purpose?

It is clear that subtitles should be put on the catalog cards. If one is investigating the subject of original sin, a book called *Sinners* all may seem worth considering; but not if its subtitle be *The Love Affairs of a Reprobate*. But *Sinners* — their Hope of Salvation gives better promise. What would be the difference in the call numbers of these two books?

When dealing with a subject which ought to be kept up to date, read the whole card, and even look for later cards with the same title.

In one library a card contains: 628.1 W57. The microscopy of drinking water. Whipple, 1889.

The next card reads: 628.1 W571. The microscopy of drinking water, with a chapter on the use of the microscope. Whipple, 3d ed., rewritten and enlarged. 1914.

Explain the difference between the two books. Notice the slight difference between the two call numbers.

(In some libraries, both of these books have the same number, and all the information about the second book is put on the first card. The reader, then, has to see to it that he gets the later book.)

When the card catalog has been examined, and only those books listed which may prove suitable, the book shelves may be visited. One subject may be found in several departments of the library.

For instance, in a list of books to be read on the general subject of *pottery*, occur the following:

- 1 553 R441 Clays, their occurrence, properties, and uses. Ries, H.
- 2 738 M22 Pottery decoration under the glaze. McLaughlin, M. L.
- 3 666 An9 Manufacture of glazed brick. Ansell, H.
- 4 811 L861 Keramos. Longfellow, H. W. (In Complete Poems)

Compare with the decimal system classes, on p. 26, and decide what four departments of the library are included in this list.

On visiting the shelves and extracting the books, it may be that a book, discarded on study of the card, will be selected because of its attractive appearance. Even its size may be a determining factor. A very large book is likely to be either too diffuse or too exhaustive for some readers; a less complete work may attract a reader new to the subject.

A book which was included because its date of publication was recent may have gone through many editions unchanged, and have a copyright date (probably on the back of the leaf containing the title) which shows it to be superannuated.

When the books which have been chosen are ranged on the reader's table, their title pages should be examined. Here are four title pages of books on gardening :

1 The Garden, You and I; By Barbara, Author of The Garden of a Commuter's Wife, People of the Whirlpool, At the Sign of the Fox, etc.

2 The Principles of Vegetable-gardening; By L. H. Bailey. Fifth Edition. On the opposite page is this list: The Rural Science Series:—The Soil, The Spraying of Plants, and 13 other titles, including this.

3 Farm Friends and Farm Foes; a Text book on Agricultural Science, By Clarence M. Weed, D. Sc., State Normal School, Lowell, Mass.

4 Garden Making; suggestions for the Utilizing of Home Grounds, By L. H. Bailey, Aided by L. R. Taft, Professor of Horticulture in the Agricultural College of Michigan; F. A. Waugh, Professor of Horticulture in the University of Vermont; and Ernest Walker, Assistant in Horticulture in Clemson College, South Carolina.

Which two seem, from their title pages, to be text-books, as distinguished from books for popular reading? Of these two, which is probably for the young? Of 1 and 4, which is probably the more scientifically accurate? Why? Which is evidently intended to be true in its statements for all of North America east of the plateau region? Which of the four books is likely to be most popular in its appeal—most like a piece of “literature”? Why?

Having gained these impressions by a hasty glance at the title pages, we look further before we begin reading. None of the books is introduced by any great author or specialist who has been asked to be sponsor for it, or to interpret it to his friends in the reading public; each stands on its own feet. Neither of the Bailey books has even a preface. Each gets at once to business. But the Weed book has a preface, and the Barbara book a Greeting—a rather unusual form of preface. In the preface of Dr. Weed's book he confirms the first impression as to its type; he hopes “that teachers will be able to lead their pupils” etc. Barbara's Greeting convinces us that our expectations of literary flavor were correct—“This book is for those who, in treading the garden path, have no thought of gain; rather must they give etc.” And the short greeting ends with three lines from Whitman.

If what we want is definitely stated facts, which three books shall we retain?

The next step is to examine the tables of contents. These tables show that the Weed book consists of five parts; I. Friends and foes among the weeds; II. Friends and foes among the insects; III. Friends and foes among the fungi; IV. Friends and foes among the birds; V. Friends and foes among the mammals.

If you wish to know how to raise vegetables on the land around your new house, is this the book you want? Why?

The contents of the two Bailey books lead one to believe that either contains as much as is needed for a small place. As one book is less expensive than the other, it would perhaps be better to buy it. There are, however, three more experiments that can be made. The most obvious experiment is to read a part of each book. But books like these are not intended to be read through, from cover to cover like a novel. When and how do we read in such books? By the

help of what do we find what we want? If you have these two books in hand, look up any two subjects, as *asparagus* and *turnips*, read the text on each, and look at the illustrations. In *Garden Making*, the Index gives: *Asparagus* — 382, the words at the top of the column of figures being Page, not Paragraph, or Section, as is sometimes the case. In *Principles of Vegetable-gardening*, the index reads: *Asparagus* 242, 433; acreage, 13; longevity of seeds, 135. These numbers, presumably, mean pages. Which book is probably fuller in its treatment? Which seems to be simpler for daily use?

In this case, the more troublesome book is, nevertheless, the better, as can be discovered only by reading parts of the text.

In another book by the same author, the index for *Apples* runs:

Apple and the scab	347, 354
culture, status of	136
growing, status of	30
root broken	280
roots	161

through 34 lines of index, referring to 44 pages of the text, from p. 2 to p. 459. What should be the intellectual quality of one using the book?

When a book which you are reading does not please you or instruct you well, what courses may you pursue? Which course *do* you pursue? Which course *should* you pursue? Why?

Exercise VIII For Classes Using this Book

(A) Each pupil may bring for the next lesson an account of the entire process by which he selected one or more books on a topic connected with some branch of his legitimate work.

(B 1) 1 Consult the preface of Pancoast's *Standard English* prose. For what class of readers has the book been written? Does the preface show what ground is covered by it?

2 From the table of contents of Lowell's *Among my books*, do you find that he has included an essay on witchcraft? If so, on what pages is it to be found?

3 Consult the index of Fiske's *American Revolution*. On what pages does the book treat of the Stamp Act?

4 Consult the index of Bryce's *American Commonwealth*. On what pages do you find a discussion of "Bosses"?

5 On what pages of Tarr & McMurry's *geography*, second book, do you find the longest account of tracks of storms? Use the index.

6 Consult the life of Scott by Lockhart and also that by Hutton. In which book could you most quickly find a reference to George Canning? Why?

7 Consult the introduction to *Minor poems of John Milton* (Rolfe edition). What do you find of interest in connection with a study of the author's work? Or,

(B2) 1 Consult the preface of Palgrave's *Golden treasury*. For what class of readers has the book been compiled? Does the preface show the ground covered by it?

2 From the table of contents of Emerson's *English traits* do you find that he has included in this volume an essay on wealth? If so on what pages is it found?

3 Consult the index of Church's *Story of Carthage*. On what page does the book treat of Marcellus?

4 Consult the index of Fiske's *Discovery of America*? Where will you find references to the Mississippi river?

5 On what pages of Fiske's *Critical period of American history* do you find the longest account of Samuel Adams in the Massachusetts Convention? Use the index.

6 Consult the life of Johnson by Stephens and also that by Boswell. In which book would you find most quickly a reference to Edmund Burke? Why?

7 Consult the introduction to *Select poems of William Wordsworth*, edited by Rolfe. What do you find of interest in connection with a study of the author's work?

Summary of Information in this Chapter

The first step in choosing a book is to consult the card catalog. The date at the end of the card is that of publication. Some books have several editions that differ in value because of revisions. This may be shown on one card or on several cards. On some subjects a

book is not less valuable because written long ago. The call number indicates what phase of the subject is treated, or from what point the subject is considered. The subtitle usually explains the title.

The second step is to examine the books that have not thus been discarded. Books treating one subject from several standpoints may be found in several departments of the library.

The physical properties of a book may recommend or discourage its use, even as a source of information. Usually the title page is the first printed page of the book. It bears the title of the book and so gives some clue to its subject. It usually gives also the author's name. Note whether this author is an accepted authority, is reputable or unknown. Note also the date of publication. The date of copyright which appears usually on the reverse of the title page should be noted also, because it often shows more nearly than the date on the title page the real date at which the book was written. The value of books on certain subjects, for instance science, is largely dependent on their dates.

The publisher's name is in most cases at the bottom of the title page. The work of different firms must be learned from experience.

An introduction, when present, is near the beginning of the book. It is generally by some one other than the author. It may vouch for, or interpret the author.

The preface is generally by the author. It follows the introduction, or takes its place. It generally gives the author's purpose, and is therefore important. It also frequently contains acknowledgment of help received and authorities used. This may be of value to the reader.

The table of contents is usually near the beginning of the book. Its topics follow the order of the material in the book.

Illustrations, consisting of pictures, maps, diagrams, etc., may beautify or elucidate the book. Sometimes the artist's name occurs on the title page.

The index is almost invariably at the end of a volume. It is a list in alphabetical order of subjects treated, or mentioned. The simplest index gives for each entry a reference to a page. For special symbols used in indexes, there is generally an explanation at the beginning or end of the index or at the bottom of its first page.

Order of the Lesson

- (A) Collect Exercise VI brought in.
- (B) Conduct Exercise VII orally.
- (C) Give out Exercise VIII to be brought in next week.
- (D) Give out extract from Poole, Chapter V to be read before next lesson.

Plan for keeping a record of written work.

Have an alphabetical list of the pupils with many spaces after each name, as for oral work. Write at head of columns dates at which work is to be handed in. Above, lengthwise of the paper, write titles or numbers of exercises, or both. Above that, enter dates when papers were returned to the class.

Returned	Oct. 4	Oct. 6	Oct. 9
	Ex. II	Ex. IV	Ex. VI
Handed in	Oct. 2	Oct. 4	Oct. 6
Adams, S. C.	E	G	G
Burns, R. F.	G	F	E
Crocker, L.	F	G	P

These entries show that S. C. Adams handed to the teacher on Oct. 2 a piece of written work called Exercise II, that it was corrected by the teacher and returned to S. C. Adams on Oct. 4, and that it bore the mark Excellent, in the teacher's handwriting. Exercise IV, handed in Oct. 4, was returned Oct. 6, marked Good. Exercise II, by L. Crocker, was marked Fair, and Exercise VI, Poor. If the school or library authorities desire a percentage report, figures may be substituted for these letters.

It is probable that at this point one or more supplementary lessons will be needed, to give opportunity for discussions of papers and of personal problems. These discussions may be very valuable. The two written exercises provided in Exercise VIII can thus be distributed over two or more lessons.

Chapter 5

How to Use the Magazine Indexes

The following extracts from the preface to the first volume of Poole's Index tells the story of a great achievement in a style as lucid and unpretentious as that of Caesar's Commentaries.

"Thirty-five years ago, when a student in Yale College and connected with the library of one of the literary societies, I indexed such reviews and magazines as were accessible, and arranged the references under topics for the purpose of helping the students in the preparation of their written exercises and society discussions. I had noticed that the sets of standard periodicals with which the library was well supplied were not used, although they were rich in the treatment of subjects about which inquiries were made in vain every day. My work, though crude and feeble on its bibliographical side, answered its purpose, and brought to me the whole body of students for a kind of help they could not get from the library catalogues, or from any other source. My manuscript was in great demand, and, as it was rapidly wearing out and printing seemed to be the only expedient for saving the work, it was put to press. * * * The edition of five hundred copies was chiefly taken by other colleges, and soon disappeared. The little book is now a curiosity in more senses than one. For twenty years I had not seen a copy, when, in 1877, I saw it in the reading room of the British Museum, with its leaves discolored and nearly worn through by constant handling.

My first experiment in making a general index to periodicals proved to be so useful, and, notwithstanding its shortcomings, was so kindly received, that I immediately set about the preparation of a larger work on a similar plan, and with such improvements in the arrangement and methods of work as my brief experience suggested. The list of periodicals was much enlarged. * * * The edition of one thousand copies was soon exhausted, and whenever within the past twenty-five years a second-hand copy has been offered for sale, it has brought the price of a rare book.

With the publication of the edition of 1853 I had supposed that my connection with the work was ended; for my professional duties as a librarian left me no time during the usual working hours to continue it, and the bulk of periodical literature has so enormously increased, that no one person, even if he gave it his whole time, could grapple with it alone. * * * In the meanwhile the libraries of the country and literary men have been clamoring for a new edition of "Poole's Index" brought down to the latest date. Scarcely a day has passed for the past quarter century that my mail did not bring some inquiry on the subject. * * * Periodical literature was never so rich as during the past thirty years. The best writers and the great statesmen of the world, where they formerly wrote a book or a pamphlet, now contribute an article to a leading review or magazine, and it is read before the month is ended in every country in Europe, in America, in India, Australia, and New Zealand. Every question in literature, religion, politics, social science, political economy, and in many other lines of human progress, finds its latest and freshest interpretation in the current periodicals. No one can thoroughly investigate any of these questions without knowing what the periodicals have said and are saying concerning them.

At the first meeting of the American Library Association, held at Philadelphia in October, 1876, the demand was renewed for a new edition of my index. In response to the call, I stated that if we waited for one person to make it, it would never be made, and proposed to the librarians present a co-operative plan by which the result they so much desired could be reached. This plan was carried out. * * *

The co-operative feature of this work will attract the attention of persons interested in this special phase of social service. That fifty libraries different in organization and objects,—National, State, stock, subscription, college, and free public institutions,—scattered over this broad country from San Francisco to Boston, and across the ocean in England and Scotland, should have joined hands and worked in harmony for a common object, each receiving the full benefit of the work of all the others, is an incident in bibliography and literature which has no parallel. All the work has been done voluntarily and without pay. * * * The librarian will have his pay in the consciousness that

what he has done will benefit his library and his readers, and may help his professional reputation. Persons who look only to pecuniary reward should never engage in this kind of work. Up to this time all the pecuniary reward I have had for indexing these many years can be represented by the American copper coin which will cover one's thumb nail; and yet I have been well paid. * * * *

Lay on the desk before you as many as you can obtain of the following:

- 1 A volume of Poole's Index.
- 2 A volume of Poole's Index Abridged.
- 3 A monthly copy of the Reader's Guide to Periodical Literature.
- 4 A copy of the March, June, September, or December volume of the Reader's Guide.
- 5 A copy of the Readers' Guide Supplement.
- 6 A copy of the Annual Magazine Subject Index and Dramatic Index.
- 7 A number of the Bulletin of Bibliography and Dramatic Index.
- 8 A copy of Information.
- 9 A copy of the Information Quarterly.
- 10 A copy of the Index of the New York Times.
- 11 A copy of the St. Nicholas Index.
- 12 A copy of Potter's Children's Catalog.

Exercise IX For Anyone's Use in Learning the Facts from Observation

(A) Answer such of the following questions as you have material for: *Poole's Index*. How many magazines are included in a volume of the unabridged Poole? Give the abbreviations used for three of them. How many contributors are listed? Give the names of two and the libraries they represented. Is this a subject, an author, or a title index? Prove your statement.

Afghan Life in Afghan Songs. (J. Darmesteter) Contemp. 52:453.
Same art. Liv. Age 175:418.

What is the title of the article here listed? What two magazines

published it? In which volume of the Contemporary did it appear? In which volume of the Living Age? If a volume of each represents a year, which of these is the older magazine? This article began on page 453 of one magazine. On which page of the other did it begin? Does Poole indicate how many pages the article fills? Does he show at what date it was published?

Poole Abridged. How many magazines are indexed in the abridged Poole? Who made the abridgment?

The Reader's Guide. Who publishes the Reader's Guide? Who edits it? How many pages are there in the monthly copy? How many in the quarterly? The half yearly? Why? What is a cumulative index? How many magazines are here indexed? How many books? Is this a subject, an author or a title index? Prove your statement.

Arms and Armor.

Last fight in armor. Harp. W. 57:23. F. 1, '13.

See also Rifles; Swords.

What is the subject of the article here indexed? What is its title? In looking for it would you look under L or under A? Why? In what magazine is it to be found? In what volume? On what page? Published in what year? What month? What day of the month? For what other subjects are we advised to look in order to find related material? What is a cross-reference? See dictionary.

The following extract from the preface to the Reader's Guide, 1900-1904, shows well the value of the cumulative method.

"The cumulative system of indexes, which resulted from the consolidation of the 'Cumulative index to a selected list of periodicals' and the 'Reader's guide to periodical literature', begins with this volume a series of five-year indexes.

The Cumulative index was a pioneer in cumulative indexing; it was inaugurated in 1896 by the Cleveland Public Library under the supervision of Mr. W. H. Brett. The Reader's guide began its career in Minneapolis in 1901, not in rivalry of the excellent work done by the Cumulative index, for it indexed only about twenty magazines, and was intended for small libraries and reading clubs.

The reason for the present volume is apparent. The material which was scattered through seventeen alphabets in seventeen separate numbers of the publications, issued since the beginning of 1900, is now brought together in a single alphabet."

Reader's Guide Supplement. Who publishes this index? Who edits it? How does it differ from the Reader's guide? Which contains the larger proportion of general magazines? The larger proportion of magazines devoted to special subjects? What books does the supplement include?

Annual Magazine Subject Index and Dramatic Index. Who publishes the Annual magazine subject index? Who edits it? How many collaborators assist? What other index does that resemble? What other index is included in this volume? Who edits it? How many collaborators has he? What sorts of magazines are included in the Annual magazine index? See Preface. What is indexed in the Dramatic index? What does its appendix include? Who did the compiling? What is a compilation? Has either of these indexes an explanation of its abbreviations?

Acid drops, play by Gertrude Jennings.

Praise. Graphic 89:414, ($\frac{1}{8}$), Mr. 7, '14.

Production at Royalty theatre. London. Acad. 86:312 ($\frac{1}{3}$), Mr. 7, '14.

Scene from (picture). Graphic 89:448, Mr. 14, '14.

Text. See Dramas,—Jennings.

What information, not found in the other indexes so far examined, is given here? What do ($\frac{1}{8}$), ($\frac{1}{3}$) mean? See Explanatory notes. What cross-reference is made?

Bulletin of Bibliography and Dramatic Index. Look through a number of the Bulletin. Is this a magazine or an index? Prove your statement. How often is it published? By whom? Edited by whom?

Information. Is Information cumulative? What is the difference between Information and Information quarterly? Who publishes them? What kind of an index is Information? Does it refer to any particular paper as its authority in giving news? If you wish to find an article that you remember about any subject in some special newspaper,

could you do so by reference to Information? How? Find the date. Go to a library or the office of the paper and look at the files for that date. Is there a date in every paragraph of information given?

Times Index. What is the nearest place to your residence or office where files of the New York Times can be found? See fly leaf. How often is the Times Index published? Why is this index a "Master key to all newspapers"? Read any reference and explain what the abbreviations mean.

St. Nicholas Index and Children's Catalog. What volumes of the St. Nicholas are included in the Index? In what part of the Children's catalog is this index continued? Including what volumes?

(B) Make a list of the magazines that you know best. Look through the shelves containing bound magazines in any public library and see how many of them you know. Write after the name of each magazine on your list a few words indicating the character of its articles as they have appealed to you. Spend a few moments in turning the pages of one or two bound volumes of each, and see whether your impressions are correct. Examine the current numbers of a few technical magazines, especially on subjects that interest you.

How are bound volumes of magazines marked on the back?

When copying from an index the number of the volume that you want, take the dates also, for there are a few irregularities that may confuse you.

Dublin Review
4th Series
vol. 19
052 D85
v. 128

Explain the two volume numbers.

The Independent
vol. 56, Pt. 1
Jan — Mar 1904
205 In2

Are there other volumes numbered 56? Why?

Here are the labels on the backs of two volumes on the shelves:

Overland Monthly

Vol. I

July — Dec 1868

051 Ov2

Overland Monthly

N. S. Vol. I

Jan — June 1883

051 Ov2

The Overland Monthly volumes are in two series, the old series and the new series, indicated by what letters?

Scrib. 1:143 Dec. 1870, gives an article on the Hoosac Tunnel by Washington Gladden. Scrib. M. 1:143 Feb. 1887 gives a story called the Residuary legatee by J. S. of Dale. The reason is that the Scribner's Monthly was continued as the Century when 22 volumes had been published and a new Scribner's Magazine was started several years later with a new volume I.

The first volume of the Century, since it was a continuation of Scribner's 22 volumes, was referred to as vol. 23, but bore on its back the legend vol. I. Late indexes give the correct number.

Exercise X For Classes Using this Book

(A) Write a list of the magazines that best suit the various needs of your family, and give after each name listed the needs that it will supply.

(B) 1 Look up, in any of the magazine indexes discussed, a reference to one magazine article on any one of the following subjects: Settlement work, Playgrounds, Arbor day, School gardens, Gymnastics, Kindergarten. Check the subject which you have selected.

2 Write author and title of article selected.

3 Give below the full name of magazine in which the article is to be found.

Volume

Page

4 What is the title of the index which you used?

5 What year does the volume you used index?

6 Go to the shelf and get the article referred to.

(C) Make an index of all the articles in the magazines to which you have access for the last few months bearing on any one subject.

(D) Make an alphabetical index by subject of the important events in a week's newspapers.

Note for Teacher of a Class

The amount of the material here given which can be taught will depend upon the number of pupils, the amount of time available, and the material at hand.

If a neighboring library will save its monthly Readers' guides for a year or two, there will always be one publication of which each pupil can hold a copy. But a single leaf cut from a copy will do for each two pupils. If there is one copy of each of a number of indexes, they can be so distributed that two pupils can respond to the questions on each, and items needing elucidation can be written on the blackboard and discussed. The Wilson Co. would probably supply back numbers.

Summary of Information in this Chapter

The first magazine index was made by Dr. W. F. Poole when he was a student at Yale. It was afterward enlarged and continued by the cooperative work of a number of American and a few English librarians.

Poole's Index. A subject and title index to periodicals. Indexes 232 magazines from 1802-1881. Supplements published every five years, covering 190 magazines. Last five-yearly volume 1902-1906.

Abridged edition indexes 37 magazines, 1815-1899, in one volume. Supplementary volume, 1900-1904. Key to abbreviations in front of volume.

Readers' Guide to Periodical Literature. An author and subject index to periodicals and to a few books. Published monthly by the H. W. Wilson Co., White Plains, N. Y.

Each number indexes magazine articles for the current month. In addition to this, certain numbers index magazine articles of all preceding months of the year. These cumulative numbers are the quarterly, half-yearly and yearly numbers. Each one includes and supercedes the preceding so that the final annual volume forms a complete index for the year. Does not index as many magazines as Poole, but includes some perhaps more popular, as Everybody's, World To-day, Ladies' Home Journal, Delineator, etc., not in Poole.

Readers' Guide to Periodical Literature, Supplement. An author and subject index to general periodicals and a few books not included in the Readers' Guide. Published by the same company, January,

March, May, September, November. Cumulative. Largely magazines devoted to special subjects.

(A cumulative index is one which at certain intervals republishes under one alphabet all the information previously published, at different times, under several alphabets.)

Magazine Subject Index (Annual Magazine Subject Index and Dramatic Index.) The Magazine index is a subject index to American and English periodicals not indexed in Poole or Readers' Guide. It is published quarterly as the Bulletin of Bibliography and then yearly by the Boston Book Co. Began in 1907 with 79 periodicals, but indexes some magazines previous to that date. In 1908 it took on the name Annual. In 1909 it was published in one binding with the Dramatic index. Both these indexes are made by collaboration of a number of librarians, and are edited by F. W. Faxon. The Annual specialized somewhat in history, travel, exploration and outdoor life, fine arts, etc. The Dramatic Index records the dramatic books, plays, articles, illustrations, actors, playwrights and managers of the year. Some volumes contain appendixes.

Bulletin of Bibliography and Dramatic Index Quarterly. This is a mixture of a librarian's magazine and an index. It contains a quarterly index of dramatic publications, a record of new periodicals, periodicals with changed names, and those that have died in the quarter.

Information and Information Quarterly. These are newspaper indexes. One is published monthly, and the other is a quarterly cumulation. R. R. Bowker, of New York, publishes them. They give information under subjects, by date, referring usually to no special newspaper.

New York Times Index. This is issued quarterly, and gives subject references to the news printed in the Times, but is an index to the treatment of the same subjects in any newspaper, since the date of comment in one paper is approximately the same for all. There is on the front fly leaf a list of places where files of the Times are kept.

St. Nicholas Index. This covers the first twenty-seven volumes of the magazine. It was published in 1901. *The Children's Catalog*, a book by Potter, contains, as Part II, an index of the next nine volumes.

Order of the Lesson

- (A) Collect work done under Exercise VIII, Chapter 4.
- (B) Discuss any questions raised by pupils' troubles in doing Exercise VI, Chapter 3.
- (C) Call upon pupils for comments proving that the extract from Poole was read before coming to class.
- (D) With material called for in Exercise IX open on the desk, have oral answers given to the questions in A, having the extract from the Reader's guide preface read.
- (E) Conduct B of Exercise IX orally.
- (F) Assign as many parts of Exercise X as will be profitable to the class to be brought in at the next lesson. The teachers of content subjects in the school should be asked to hand to you lists of subjects assigned by them, and you should invite appeal to you for help in the research thus demanded.

Chapter 6

How to Use an Encyclopedia

To use an encyclopedia properly one must know almost instinctively the sequence of the letters of the alphabet. This is true also of the use of the cards in the catalog, and of a dictionary. Many persons taught to read by the word method do not know their letters in alphabetic order. If you are slow in such matters, perform the following exercise.

Exercise XI For Anyone's Use in Learning the Facts
from Observation

Cut up several sheets of paper into small rectangular pieces of uniform size, or use pasteboard cards.

- (A) Write each of the following words on a card, arrange the cards according to the alphabetic sequence of the second letter, and copy the list in this alphabetic order.

<i>List to be arranged</i>		<i>List as it should be</i>	
<i>axe</i>	<i>alone</i>	<i>above</i>	<i>alone</i>
<i>above</i>	<i>after</i>	<i>acorn</i>	<i>are</i>
<i>are</i>	<i>away</i>	<i>after</i>	<i>away</i>
<i>acorn</i>	<i>ago</i>	<i>ago</i>	<i>axe</i>

(B) Arrange, similarly, according to the alphabetic sequence of the third letter :

<i>List to be arranged</i>		<i>List as it should be</i>	
<i>Albany</i>	<i>Alpine</i>	<i>Albany</i>	<i>already</i>
<i>always</i>	<i>Alfred</i>	<i>Alfred</i>	<i>also</i>
<i>also</i>	<i>Allen</i>	<i>Allen</i>	<i>alter</i>
<i>alter</i>	<i>already</i>	<i>Alpine</i>	<i>always</i>

(C) Arrange, similarly, according to the alphabetic sequence of the fourth letter :

<i>List to be arranged</i>		<i>List as it should be</i>	
<i>anthem</i>	<i>Antrim</i>	<i>ant</i>	<i>antic</i>
<i>antagonist</i>	<i>antic</i>	<i>antagonist</i>	<i>antler</i>
<i>ante</i>	<i>antler</i>	<i>ante</i>	<i>Antrim</i>
<i>ants</i>	<i>ant</i>	<i>anthem</i>	<i>ants</i>

(D) Arrange the following list, first in piles according to first letters, then each pile in perfect sequence, to make "dictionary order" :

<i>List to be arranged</i>				
<i>absent</i>	<i>upset</i>	<i>lady</i>	<i>whose</i>	<i>which</i>
<i>gravity</i>	<i>money</i>	<i>grade</i>	<i>lot</i>	<i>fuss</i>
<i>lost</i>	<i>grave</i>	<i>grasp</i>	<i>whoa</i>	<i>great</i>
<i>gravy</i>	<i>quack</i>	<i>whom</i>	<i>grace</i>	<i>white</i>
<i>uplift</i>	<i>yolk</i>	<i>cradle</i>	<i>know</i>	<i>cut</i>

<i>List as it should be</i>				
<i>absent</i>	<i>grade</i>	<i>great</i>	<i>money</i>	<i>white</i>
<i>cradle</i>	<i>grasp</i>	<i>know</i>	<i>quack</i>	<i>whoa</i>
<i>cut</i>	<i>grave</i>	<i>lady</i>	<i>uplift</i>	<i>whom</i>
<i>fuss</i>	<i>gravity</i>	<i>lost</i>	<i>upset</i>	<i>whose</i>
<i>grace</i>	<i>gravy</i>	<i>lot</i>	<i>which</i>	<i>yolk</i>

(E) Below is represented the arrangement of syllables on the backs of a set of encyclopedias.

A	Ash	Bol	Car	Cod	Dem	Eve	Fla	Gla
to	to	to	to	to	to	to	to	to
Ash	Bol	Car	Cod	Dem	Eve	Fla	Gla	Hov
I	II	III	IV	V	VI	VII	VIII	IX
Hov	Kin	Mag	Mot	Pal	Pri	Sha	Tro	Vim
to	to	to	to	to	to	to	to	to
Kin	Mag	Mot	Pal	Pri	Sha	Tro	Vim	Zym
X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII

An encyclopedia volume generally contains the words from the first syllable on its back, inclusive, to the last syllable, exclusive, but the rule is often violated.

In which volume will be found: Asgard? Ashtabula? (Why?) vaccination? fort? Athens? Patmos? Vulgate? England? tithes? Nestor? kelp?

As the syllables on the backs of the books indicate in which volume we are to look, so the two words or syllables at the tops of the pages indicate the subjects on the page, inclusive of both words.

If a page is marked at the top Acorn to Acre, what is its first word? Its last? Give another word which would belong on the page.

Take, at random, several encyclopedia volumes, and copy a few subjects therein treated. If you have access to another encyclopedia, find the same subjects in it.

(F 1) If you have the Encyclopaedia Britannica, eleventh edition. Note:

Vol. 1. First title page. What is the age of this encyclopedia? What is the average length of time between editions? The longest time? The shortest?

Who copyrighted it? What has the Berne Convention to do with it? Use the books to find out. To whom is it dedicated? Why? What is the Prefatory note about? What is the attitude of the books toward controversial questions? (p. xxi.) How are Roman and Arabic numerals used in the paging? (This is a common practice, especially in books containing much prefatory matter.) What do you

gather about the authorship of the book? Find five subjects on which this encyclopedia suggests a bibliography for further information.

Vol. 29, p. 9. Find Aconite. There is an article on it in vol. 1, p. 151, top of second column. Turn to p. 1 to find how we can know that. It is also mentioned in vol. 13, p. 768, at top of first column. Where can a picture of the flower be found? Where is it treated as a poison?

Vol. 29, p. 881, etc. If you wish to instruct yourself in geology, what four subjects may you read about? Will you need to read the biographies of famous geologists as suggested in No. 5? Turn to p. 913. How many subjects on general geology are listed as having articles about them in the books of this set? Find two of the articles. (F 2) If you have the New International Encyclopaedia, 1902. Note :

Vol. 1. Who are the editors? The publishers? What is the date of copyright? What (p. v.) do the authors think of the index of the Britannica? Does the list of contributors tell the separate articles written by each, or only the general subject covered? How is *aerenchyma* pronounced? Find five articles which refer to other articles in this encyclopedia.

Exercise XII For Classes Using this Book.

(A) Give the volume and page of two encyclopedias in which you find each of the following subjects: Aquarium, weaving, Garden City, Chamonix, refuse collection.

(B) Compare two encyclopedias and tell in two written paragraphs what features they have in common, and in what ways they differ.

Summary of Information in this Chapter

An encyclopedia, or cyclopedia, is a work in which the various topics included under several or all branches of knowledge are treated separately and usually in alphabetic order. Its articles should be accurate, full, brief and clear. It generally consists of a number of volumes, with index syllables on the back of each, indicating its content, and a similar index at the top or bottom of each page. The contents of a

volume are from the first syllable or word, on the back, inclusively, to the second syllable or word, exclusively. The content of a page is from the first to the second syllable or word, inclusive of both.

The best encyclopedias usually give a list of the contributors of articles. At the end of important articles there are generally bibliographies, and often cross-references. The *Encyclopaedia Britannica* is elaborately indexed, and the *New International Encyclopaedia* gives the pronunciation of words.

Order of the Lesson

(A) Return papers marked Exercise VIII, A, and have one or two of the best or worst read for model, or for discussion.

(B) Return papers marked Exercise VIII, B 1, or B 2, with such comment as any general fault makes necessary.

(C) Give Exercise XI orally, and rapidly. It is worth while to use this method, if pupils are to be teachers, as many teachers have difficulty in making alphabetic lists accurately and quickly.

E will be easy to give, with books open. Its second part can be done quickly thus:

Let each pupil take one volume of an encyclopedia from the shelves write on a slip of paper a subject contained in it, two questions about the contents of the article and her name. Then replace the book. Pass papers. Let each pupil go to the shelves, select the proper volume for her subject, return to her seat, answer in writing the two questions and replace the book. Return papers and mark correct, or a failure. (This can be made more valuable if pupils are allowed to make searching questions.)

The study of the first volumes of the two encyclopedias cannot be made at first hand by every pupil. Several pupils can handle each book, reading aloud and telling what they find.

(D) Give Exercise XII to be written out of class.

Chapter 7

How to Use the Dictionary

Everyone knows that the dictionary tells us how to spell words. But children complain, and justly, that it is necessary to know a good deal about the spelling of a word before one can find it in the dictionary. Phthisic will certainly be looked for under *t* by the uninitiated. Hence a knowledge of the sound values of letters is a prerequisite to the proper use of any dictionary.

Exercise XIII For Anyone's Use

(A) Collect any of the following :

Worcester's New Primary Dictionary. c. 1914

Worcester's New School Dictionary. c. 1914

Webster's Shorter School Dictionary. c. 1914

The Concise Standard Dictionary. c. 1915

On what page is the key to the vowel sounds given? How many such keys are used? How many sounds of *a* are listed? Of *e*? Of *i*? Of *o*? Of *u*? Of *y* as a vowel? Are any vowel sounds peculiar to foreign languages listed?

On what page are the consonant sounds treated? What sounds of *c* are given? Of *ch*? In how many ways may the sound of *k* be indicated? How many sounds are given for *ch*?

Are there any rules for spelling given either at the front or back of this dictionary? Where is there a list of the abbreviations used? Is the key to pronunciation found at the foot of each page?

Do the words on the dictionary pages begin with capitals or small letters? Is one accent or two used? How are the syllables indicated when accented? When unaccented? How is a compound word indicated? What does *diacritical* mean? Is the pronunciation of each word shown by diacritical marking in the word itself, by a respelling of the word in another type, or in both ways? If the word is respelled, is it respelled as a whole, or is only any doubtful part respelled.

Where are the pages numbered? Where are the guide words

placed? What do they indicate? Is the part of speech indicated after each word? How?

Special Exercises

Worcester's New Primary. What words are omitted from this book? What words, formerly omitted, are included? Why? What is evidently the attitude of the book towards the spelling reform movement? Why should the position of the key to the sounds of letters be firmly impressed in using this dictionary? Read, carefully, the chapter on orthography, p. 6-7. What subjects occupy p. 8-12?

Look for *apothegm*. To what are you referred? What definition is there given? Look up *maxim*. Rewrite the definition of *apophthegm*, using, instead of *maxim*, one of its definitions. Look up *pithy*. Rewrite the whole definition again, using, instead of *pithy*, one of its definitions. What part of speech does the dictionary indicate for *apothegm*.

Look for *plant*. What two parts of speech are defined under the word? In the definition of the noun, what is the difference between the use of the semi-colon and the use of the colon? Explain similarly the semi-colon and colon in the definitions of the verbs.

Look for *tenable*. Are these two definitions for two meanings, or two attempts to define one meaning? How do you know?

What is the difference between the abbreviations on p. 7 and those on p. 342? To what are the last six pages of the book devoted?

Worcester's New School. When was the first Worcester's elementary dictionary published?

On what page is the key to sounds of the letters? Look up the meaning of penultimate and antepenultimate, and work out the meaning of the paragraph on words ending in *ine* on p. 3, finding examples. Note the discussion of such words as *coffee* on the same page. How is the noun *finance* pronounced? On p. 5, note what is said as to the likeness of *desuetude* to *conquest* in pronunciation.

Read the paragraphs on accent, p. 7, noting especially the difference between the syllabifying of *beneficial* and *magician*, and the accent of *ordeal*.

To what subject are p. 9-14 devoted? p. 15-19?

Look for the definition of *inodorous*. Note the use in this definition of the word *wanting*. Look for the word *wanting*. What two parts of speech are defined under *want*? From which of these is *wanting* derived? Which of the two definitions of the verb is used in the definition of *inodorous*? Rewrite the definition.

What is the system of pronunciation of Greek and Latin proper names in this book? Into what three classes may we divide them? Which two classes are treated together? Note the pronunciation of words ending in *aus* and *ous*. Find the pronunciation of *Actium*, and read the rule referred to. To what words are p. 329-336 devoted? Note the pronunciation of *Massachusetts*. To what modern country does the ancient Libya correspond? What was an ancient name for *Edinburgh*? What is the difference in pronunciation between *Genesis* and *Gennesaret*? What does *Hiram* mean? *Amanda*? What is the tale of *Pyramus* and *Thisbe*? What is the difference between the subjects of p. 375-380 and 381-385? What are treated in the last ten pages of the book?

Webster's Shorter School. What proof is offered in the preface that the book is up to date? What is the value of the capitalization used in the book?

Look for *edgeways*. Why is the pronunciation of *ways* only indicated?

Look for *edify*. What does [2] mean? See foot of page and p. viii. Look for *emeer*. What does *var.* mean? See p. x. What does *variant* mean? Look for *en bloc*. What does || mean? See p. x. Look for *clef*. Is §, p. vi referred to? Look at the illustrations on five illustrated pages. What part of speech do they all illustrate? Study any one of these pages, to see whether the word illustrated is the word you would have chosen as needing such supplement of the definition given.

To what subject are the last three pages of the book devoted?

Concise Standard. What is the principle on which the words given in this dictionary were selected? How are they capitalized? Where are prefixes and suffixes treated? How are compound words indicated? See p. iv. Read the paragraph, p. iv, on reformed spelling.

Look for *bind*. How many words are defined under it? Look for *coin*. How much illustration is given? Look for *cat*. Is there anything wrong with the first definition? What word in the third definition is not clear? To clarify it, look up *purchase*. Rewrite the definition with this aid. Is it clear? Is there anything on the page to indicate that the next page is filled with pictures of cats? Look for *Puritanism*. Why is it capitalized? Why is it not defined? See p. iv.

What does *similia similibus curantur* mean? What does the *currant flower* mean? The *opal*? What is the difference in meaning between *M. D.*, *Md.* and *mdse*?

(B) Collect any of the following:

Comprehensive Standard Dictionary. c. 1914

Webster's Elementary School Dictionary. c. 1914

Worcester's Comprehensive Dictionary. c. 1912

Comprehensive Standard. For whose use is this book intended? How large a vocabulary is given? Look for *color*; *colour*. Look for *catalog*. What does the bracket mean? See p. iii. Look for *bombastical*. What does the sign ‡ mean? See p. iii. Which spelling of *brusk* or *brusque* does this book prefer? What was the population of Brussels when this book was made? How are capitals used in the vocabulary? How are the hyphen and double hyphen used?

Look for *buckeye*. What is the chief word of the definition? Look for *horse-chestnut*. What contradiction of the *buckeye* definition is contained? Look for *soapberry*.

Look for *soi-disant*; for *soil*. One of these words is French, and the other is from the French. How is the distinction shown?

Look for *disable*. What does the *e* mean? See p. vi. What does 1-80 under the illustration of *dromedary* mean? Why is there not a similar fraction under the horse and dray on the preceding page? When did John Dryden live? Write a sentence containing a synonym and an antonym of *antipathy*. Note that you have an antipathy *to*, but a detestation *of*. See p. 681.

Webster's Elementary School. For whose use is this book intended?

Look for *agree*. Read the definitions of the first five meanings, and the illustrations thereof. Are the sentences valuable? In what subject

is the word used technically? Try to use the synonyms in sentences where they could be replaced. Give a sentence exemplifying the colloquial meaning of *agreeable*.

Are derivations (etymologies) given in the vocabulary?

Look for *agglutination*. To what word must you go back? The definition of *agglutinate* refers to *adhesion*. To what word does that lead back? With the light thus gained, write your own definition of *agglutination*. Look for *to*. Which of the uses or meanings of *to* as a preposition is unfamiliar to you? Are the definitions of the adverb as clear as those of the preposition? Why? Look for *scimitar*. What spellings are allowed? Look for *program*; *judgment*; *maniac*. What does the [4] after *maniac* mean?

Look for *cuisine*. To what language does it belong? What does the sign || before it mean? See p. xvi. Look, on the same page, for *cul-de-sac*. One of these words is a compound; the other is not. How can the difference be told? Between these two words is the word *cuisse*. Is it French? Why, do you suppose?

To what are p. xi-xiv devoted? What classes are contained in the dictionary of proper names? Look for *Cleveland*. What is the population of the city? See note, p. 671. When was Grover Cleveland born? How are capitals of countries and states indicated in this list? What are the abbreviations for Kansas? What may *min.* mean? To what are the last three pages of the book devoted?

Worcester's Comprehensive. For whose use is the book made? See p. 6. What is a *counting room*? How is the plural of synonym spelled in the preface? How is the singular spelled in the vocabulary? Look for *homonym*; for *antonym*. How are capitals used in this book? With what three other classes are American uses grouped, p. 7? What does "to guard against corruption", p. 7, indicate as to the policy of the book? Read the last sentence on p. 8. What do *prefatory* and *prefixed* mean?

Look for *table-talk*. What is discourse? Why, in its definition, is *conversation* in italics? See p. 40. To what word does its definition bring you back?

Read the paragraph on *us*, p. 17. What general characteristic of

the English language does it exemplify? Read the second paragraph, p. 21. Does it reinforce your last observation? Look at the list of nouns or adjectives and verbs, p. 21. Is *address* included? Look for the word in the body of the book. Should it have been included? What is the standard of pronunciation in English? See p. 23, on *orthoepey*. What is *orthoepey*? What remark is made, p. 24, as to the orthoepey of the United States and Great Britain? To what are p. 29-36 devoted?

Read the article beginning on p. 37. Make a list of the material appended to this dictionary.

(C) Collect any of the following:

Students' Standard Dictionary. c. 1909

Desk Standard Dictionary. c. 1915

Webster's Secondary School Dictionary. c. 1913

Worcester's New Academic Dictionary. c. 1910

Concise Oxford Dictionary. c. 1914

Student's Standard or *Desk Standard*. When was the book last copyrighted? How many words does its vocabulary contain? For whose use is it intended? What use has been made of English classics in compiling it? Read what interests you as to the method of compounding words. In the *Desk Standard*, what space has been saved by changing the usual place of the key? What emphasis is placed on the key by both? Probably why?

Look for *abetter*. How else is it spelled? What part of speech is it? From what verb is it derived? What is the derivation of the verb? How is the plural of *ambulatory* spelled? In what two subjects has the word a technical meaning? Of what is *Pathol.* an abbreviation? From what language is *ambuscade* derived? Give the derivation of *gyve*; its pronunciation; a synonym. What study is made of the letter *h* in the vocabulary? What is the value of the fraction under the illustration of *Song-sparrow*? What is the scope of the appendix?

Webster's Secondary. For whose use was the book made? Look at the classification of sounds, p. xv. What subjects are treated on p. vxii-xviii?

Look for *able-bodied*; *ablegate*. How is a compound word indicated? What do "p.p." and "R.C.Ch." in *ablegate* mean? What is the area of the Netherlands? The population? The capital? What does *en regle* mean? When may the sign for *and*, &, be used? Look up *ampersand*.

Worcester's New Academic. What does the copyright page tell about the history of the book? From the second paragraph of the preface, should you judge the policy of the book to be radical or conservative? Note the first sentence of paragraph 4. Compare the key to the sounds of letters in Worcester with the same feature in Webster and in the Standard. Find the word *phial*. Look for *vial*. Does each refer to the other? Have they the same references as to derivation? Find the two under a vocabulary at the beginning of the book. Read p. 37. How do the dates in the list on p. 39 agree with the page of copyright dates? Find *wrapper*; *wrapping*. Between the two synonyms defining one word there is a colon. How are the synonyms after the second word punctuated? What does this difference indicate?

On p. 591, what does the figure 1 after Actium show? The 4 after Aeschylus? P. 610: What was the ancient name for Siberia? What is the modern name for the Hellespont? P. 616: What name means the same as Elizabeth? P. 628: What is the pronunciation of Liege? Of Neuchatel? P. 637: Of Boccaccio? Of Brunet? Find the meaning of I. N. R. I. Of Q. V. Under medical signs, find the origin of the \mathcal{R} at the head of prescriptions. Note the use of signs on p. 659. What is a *coup de grace*? What does *andante* mean in music? Who was *Atlas*? What is the content of a *litre*? How do the appendices of this dictionary compare with those previously examined?

Concise Oxford. Where was this dictionary printed? What sort of Americans will probably like to own it? What subjects are treated in the preface? Of what do the addenda consist?

Look for *go*. What part of speech is *go*? How many *goes* are defined? Read what is said of *go*. When you come to *go to the Devil*, which *devil* is meant? P. iv, first paragraph: What does *telegraphese* mean? Is it found in this dictionary? P. v: How does

this book treat slang? Look for *ize*. Where, evidently, are prefixes and suffixes treated? Look for *per*, to assure the correctness of your supposition. What do you find, on p. vi, are Americanisms? What do you find on the same page about *favor*? What admission is made at the bottom of the page about compound words? Look for *furniture*. For what is said about *ation*, p. vii.

Look for *indigenous*, note the use of *hence* in the definition, and get the explanation from p. viii. The related use of *so* can be found in *indigent*.

How is accent indicated? Is the accent mark placed after the accented syllable, or after the accented vowel? What is the last item given in each definition? Look for *tone*. From what language is it immediately derived? From what language did the French get it? Whence came the Latin? Look for *tonga*. From what language was it taken?

Does this book seem to be scholarly, or popular, or both?

(D) Use either of the following:

New Standard Dictionary. c. 1913

New International Dictionary. c. 1913

The New Standard. What is the scope of the work? How many editors had it? When was it copyrighted? What woman was on the advisory committee? Who contributed arctic terms? Terms of chess? Chinese terms? Musical terms? What are declared in the introduction to be the essentials of a good dictionary? Perform a simple arithmetical operation to find how many terms are included in the work. What sort of dialectal terms are allowed? What did Roosevelt contribute?

In choice of spelling, what is the attitude of the book towards reform? What authorities were followed in regard to geographic names? See p. xii. Look for *nonce-word*. Read what is said on p. xvii in regard to synonyms and antonyms. Read what is said on the same page about periodicals and newspapers.

Read what interests you of the article beginning on p. xxiii, especially section 13, p. xxix.

Read carefully "General Principles," p. xxx.

Notice what sort of information is given on p. xxxii-xxxv.

Look for *gin*, the conjunction. What does it mean? What does [Scot] mean? See *Scot* under *abbreviations* in the body of the dictionary. See paragraph on dialectal terms, p. xi. Look for "*to whoop it up*." Does the dictionary contain it? Does it approve it? See definition of *slang*. How does this dictionary treat: "I have *got* to get my lesson"? "I have *got* brown eyes"? Give a common, a scientific, and a technical meaning of the noun *ooze*. Look for *differ*. What obsolete meaning has it? What distinction is made between *differ with*, and *differ from*? What is a *back number*? What is a *shelf-list*? What is the scientific meaning of *southing*? The technical meaning? The common meaning? Follow the derivation of *vignette*. What does the exhibition of a circle of red on a white pennant mean, when ships are signaling each other? Find, in the list of words under the prefix *un*, a word now obsolete; a verb; a word that you did not know before.

What does this book consider the national air of the United States? What prize did Roentgen get? When? What is that prize?

Read the first paragraph on p. 2762. What authorities permit *again* to be pronounced with a long *a* in the second syllable? Do you know any member of the Simplified Spelling Board? What does *ex cathedra* mean?

New International. Who was the editor-in-chief of this book? When was it copyrighted? What are the subjects of the plates at the front of the book? Read the first paragraph of the preface. Ask your parents or older friends if they remember the Webster speller. The history that Dr. Harris gives of the continuous identity of the dictionary, made over as it was by various scholars, indicates the sort of affection which the constant use of a dictionary creates. There are many American families which have had a "Webster" in the house for more than a century. The difference between the first and the last of these books, could they be compared, would be instructive. How many words does the book now include? See p. 6.

What is the difference between the words at the top and those at the bottom of each page? Why does the amount of space given to

the minor words vary so much from page to page? Why are the minor words treated in narrower columns?

Read what is said on p. vi of the school and the newspaper. Read the paragraph, p. vii, on world relationship. Read what is said of the Oxford dictionary at the top of the second column, p. vii. Is it usual for one book of a kind to praise another? Who wrote this preface? Do you judge that he felt that the New International and the Oxford were rival works? See *Ebb and Flow of Language*, p. vi. Does this dictionary contain all the words in the language? See p. x. To what are p. xiii-xx devoted? What part of p. xxi-xxxvi could you read with profit?

Is the key to the pronunciation symbols, p. xxxvii, repeated on the pages of the vocabulary? What part of p. xxxix-lviii would be most interesting to you?

Read so much as you can understand of the Rules of Syllabication on p. lix. On p. lx, satisfy yourself as to what authority there is for pronouncing *aeronaut* with three syllables. How many syllables do you give it? How is it usually mispronounced? What pages of the book are given to a discussion of the principles of spelling? In what part of a book are addenda usually found? Where are the addenda in this book?

Look for *balluster*. Is it in the main vocabulary? Try the minor vocabulary. What does the sign mean? See p. lxxx. Look for the word under its modern spelling. From what ancient language is it derived? In what two modern languages are there words derived from the same? Why is the word applied as it is in architecture?

Look for the transitive verb *begin*. What obsolete use of the word is noted? To what word must you go back to find the parts and inflections of *begin*? In studying its derivation to what other word are you referred? What does *cf.* mean? Look up *gin*. How is the final consonant treated in the nouns derived from *begin*? Why? What are the synonyms given for *beginning*? How is the list punctuated? Look for *beguile*. How many synonyms are given? Into what two groups are these synonyms divided by punctuation? With which meaning are the words in the first group synonymous? With what meaning are those in the second group synonymous?

What relation do you find between *balance* and *two*? Is there any difference in meaning between *fatherly* and *paternal*?

Look up the adjective *lisle*. What are its derivation and meaning? Can you find the origin of the meaning of *very*? How does *side*, the noun, come to mean a party? Can you find justification for the fact that in slang *cheek*, *gall*, and *side* are used as synonyms?

Read the first column of the introduction to the Gazetteer and Biographical dictionary at the end of the book. What is the area of *Kano*? Its population? What was the real name of *Antonio da Sangallo*? What was the pseudonym of *Mary Ann Evans*?

Read the note after the hand under mathematical signs on p. 2547.

To what are the last 70 pages of the book devoted? What value is there in such a classification?

(E) Use either of the following:

Century Dictionary

New English Dictionary on Historical Principles — Murray
Century. How many volumes are there?

Volume I: How many words are defined? What is the principle on which the vocabulary is chosen? See the Preface. What is the attitude of the editors towards dialect? Towards slang? Who wrote the preface?

Read the paragraph on etymologies.

What is the attitude of the book towards American spelling and the spelling reform movement? What is said on p. xiv in regard to the mark placed over the *a* in such words as *ask*? What is said of the meaning of the marks under *t*, *d*, *s*, *z*, before *u*?

What is the difference between this dictionary and an encyclopedia?

Look for *affix*, noun. Where will you find its complete known derivation? To what older form does the derivative discussion under the verb refer? What does the sign *affitch* mean? What is the common meaning of the noun? Its scientific meaning? Its technical meaning? What does the star above the word mean? What additional information is given in the supplement?

Look for *afforcement*. What does "Stubbs. Const. Hist. §164" mean? What does "Bailey" mean? See p. vi and p. xvi.

Volume IV: Read all that is said of *glut*; follow the word to the

supplement. Look for *glassware*. Do you find it in the main vocabulary? Try the supplement. To what are you referred? Is that word in the main vocabulary?

What impression do you get from the illustrations of this book?

New English Dictionary, Murray. Volume I: Read the first two paragraphs of the preface. What women were included in the work? How many volunteers finally responded to the appeal? Was the work all paid for?

What is the aim of this dictionary? What distinction is made on p. vi between a dictionary and an encyclopedia? Compare the old and the newer words of the language in their tendency to become obsolete, p. vii. Read the latter part of the paragraph on p. viii on etymology, beginning with, "The origin of language". Read so much of the paragraph on unsettled pronunciation as comes after, "The Editor was once present", p. x. Read Dr. Johnson's experiences, p. xi and xii and the first sentence of the next paragraph. Glance at the diagram of the vocabulary, p. xvii.

Look at the key to pronunciation, p. xxv. Have you ever seen these symbols of sound used before? Read the second paragraph under pronunciation, p. xxiv. Is the key given at the top or bottom of the pages of the vocabulary as in other dictionaries? Keep, then, the place of its occurrence marked when using the book for pronunciations. Where is the list of abbreviations?

Volume V: Read in the third paragraph from the end of the preface the record of the sort of volunteer help that is to be obtained for a truly scholarly work. Look at the inscription on the page following the title page, where dedications usually appear.

Look for *splurge*. Where did it originate? How did it originate? In what year was it, to our knowledge, first used? How lately did the word or its derivatives get into the *Atlantic Monthly*?

How does the American *splendiferous* compare with the English *splendacious* in origin? In time of use? In meaning?

How much space is given to the verb *take*?

Look over the treatment of the verb *shall*.

Read the first paragraph under the verb *be*, and note the length of the treatment.

Read the first paragraph under the noun *rat*, and see how, when and where the term was applied to strike-breakers.

From what language did the European nations get the word *camphor*? When and where was it first mentioned in English? Count the words derived from it.

Look for the origin and uses of the word *fake*.

Look at the miscellaneous phrases collected under the word *hat*.

Look for the two meanings and origins of *limbo*.

Look for the origins of *naught* and *nought*.

Look for the origins and meanings of *od* and *odd*.

From what is *poet* derived?

Look at the treatment of *do* for its origin and some of its uses when combined with prepositions.

Exercise XIV For Classes Using this Book

(A) Select two English dictionaries that you have used, and write a couple of paragraphs telling your opinion of their comparative merits, giving examples to prove your statements.

(B) Notice, for a week, what needs arise in the group of people with whom you are associated, for the use of a dictionary, and how those needs are met. Write a paragraph on the amount of use of dictionaries among a certain class of persons, with probable reasons and suggestions for improvement.

(C) Read the article on the dictionary in any good encyclopedia, and be ready to report anything of value therein contained.

(D) Give differences in meaning among the terms: dictionary; vocabulary; lexicon; glossary; thesaurus; index; gazetteer; concordance.

Summary of Information in this Chapter

The first dictionary known to us consisted of clay tablets found among the ruins of Nineveh. The Greeks and Romans used no dictionaries, although they had special vocabularies. But in the age of Augustus an Homeric lexicon was compiled. The Hindoos had many Sanskrit dictionaries, all in rhyme!

The making of real dictionaries in Europe began with the study of Arabic in the 10th Century. In the 11th Century, Eudisia, wife of Constantine XI made a dictionary called "Bed of violets".

In 1502 Calepino made a Latin dictionary afterwards extended to 11 languages, and all dictionaries were long thereafter called Calepino. There was no Greek-English dictionary until the 19th Century. Everyone learned Greek from a Greek-Latin dictionary.

In the late 16th and early 17th Centuries, dictionaries of modern languages were made. The greatest early attempt at an English dictionary was that of Dr. Samuel Johnson, 1755, which was reprinted in England as late as 1866. It was superseded by American dictionaries, of which the first was that of Noah Webster of spelling-book fame.

The Webster Dictionaries. Noah Webster was a descendant of Governor Bradford. He entered Yale College just before the Revolutionary War, and spent part of his college years in fighting. He left college with one dollar as capital, and taught school by day and studied law by night. Then he wrote a speller which was widely used in America for many years. The fact that Americans spoke with a much more uniform pronunciation than did the English was attributed by Webster's contemporaries to the wide use of this speller.

In 1807 Webster went to work on a dictionary, which was sadly needed, as Johnson's was the great authority, and that was published over a half century before. He supported his family for over twenty years on the royalties from the spellers, which amounted to less than a cent a copy, while he wrote the dictionary. And, in order to write the dictionary, he studied the vocabularies of 20 languages, and visited the libraries of Paris and London.

The dictionary was published when Webster was 70 years old, and has been used ever since. The first edition, printed in 1828, contained 70,000 words. New editions, one before his death, and others edited by his son-in-law and by Dr. Porter, later President of Yale, increased the number of words, so that the edition of Civil War days had 114,000. In 1890 the name was changed to International, and in 1909 to New International, edited by Dr. Harris, United States

Commissioner of Education. This edition contains 400,000 words.

The publishers claim: 1. That the accuracy of the original Webster has been retained, but historical matter introduced. 2. That the new words and phrases brought into the language by increase of knowledge have been defined. 3. That very full information has been given. 4. That by giving the more important words in the upper division of each page, and the less important in the lower, space and time are saved. Dr. Harris's preface is a valuable treatise on language.

The book contains besides, a list of authors quoted; a brief history of the English language; a guide to pronunciation; a treatise on spelling; a pronouncing gazetteer; a pronouncing biographical dictionary; a list of signs in printing, and pages of classified illustrations. The last page is numbered 2620.

Webster's Secondary School Dictionary. This is a book $8\frac{3}{4}" \times 6"$, of 842 pages. It is abridged from the New International, and is intended for high schools. It claims to contain all the words used in ordinary speech and in school literature. It has also a geographical and biographical dictionary, a pronouncing dictionary of foreign words and phrases, and a list of printing abbreviations. It has 70,000 words, — as many as the original Webster of 1828.

Webster's Elementary School Dictionary. This book, $8" \times 5\frac{1}{2}"$, has 702 pages, containing 45,000 words with rules for spelling, a list of prefixes and suffixes, a geographical and biographical dictionary, foreign words and phrases and a list of weights and measures. It is abridged from the New International, and claims to meet with wisdom the needs of grammar grade pupils.

Webster's Shorter School Dictionary. This book, $7\frac{1}{4}" \times 5\frac{1}{4}"$, with 522 pages, contains over 35,000 words. It has spelling rules and a list of weights and measures. It claims to be clear and simple, and to use no word in a definition that is not itself defined. It is intended for elementary schools.

The Worcester Dictionaries. Joseph Emerson Worcester, born at the close of the Revolutionary War, like Webster a graduate of Yale and a school master, published a number of geographical works, an

abridgment of Johnson's dictionary, an abridgment of Webster's dictionary and finally a dictionary of his own. He followed closely in Webster's footsteps, making first a small book, then a large one, then a speller and revising his larger book, until in 1865 it contained over 1800 pages. His large dictionary may still be found in many households and libraries. The edition of 1888 contains a long article on English grammar, with full declensions of *be*, *have*, and *love*; a list of words with the proper prepositions to be used with them annexed; the Lord's Prayer in various languages; an essay on archaisms, provincialisms, and Americanisms; a history of English lexicography, and a catalog of English dictionaries,—among which is "The Ladies' Lexicon and Parlour Companion, 1829."

The Worcester School Dictionaries. There are four books now printed in the series. *The New Primary* is a little book, $6\frac{3}{4}" \times 4\frac{1}{2}"$, containing 354 pages. All the words begin with capitals; varied spellings are given, and irregular and foreign plurals. Diacritical marks and, when necessary, phonetic spelling are used. There is a chapter on orthography, a list of prefixes and of suffixes, a list of abbreviations used in printing, and a table of moneys. *The New School*, $7\frac{1}{2}" \times 5"$, with 395 pages, gives 35,000 words, words and phrases from foreign languages, geographical and biographical names, names of distinguished men of modern times, Scripture proper names, Christian names of men and women with their meaning, as well as the tables of the smaller book. *The Comprehensive*, $8\frac{1}{4}" \times 5\frac{1}{2}"$, with 693 pages, gives 48,000 words, and has all the features of the smaller books. *The New Academic*, $8\frac{1}{2}" \times 5\frac{1}{2}"$, 689 pages, 264 illustrations has 45,000 words, and is like the *Comprehensive*, but gives fuller etymologies.

The Standard Dictionaries are a modern series published in America by the Funk and Wagnalls Company, under Dr. Isaac Funk, editor, with the help of over 380 specialists and scholars. *The New Standard Dictionary*, $12\frac{1}{2}" \times 9"$, 2808 pages, contains 450,000 words. Its introduction contains a chapter on spelling and pronunciation, with paragraphs on spelling reform, two pages on the compounding of words, and a foreign language chart.

Two pronunciation keys are given, one similar to that of Webster, here called the Text-book Key, and a New Scientific Alphabet, agreeing closely with the alphabet authorized by the National Education Association after conference with the American Philological Association, and the Modern Language Association of America.

The keys are placed at the top of the pages between the page numbers and the guide words, to save room. The definitions are advertised to embrace: 1. A definitive statement. 2. Suggestive synonyms. 3. Illustrative phrases. 4. Quotations. Everything is under one alphabet, including proper names of people and places. But there are addenda covering disputed pronunciations, foreign phrases, and statistics of population. The book has a list of 7500 synonyms, and discusses 5000 antonyms. It bears the copyright date, 1913.

The Students' Standard, 9½" x 6½", 917 pages, is an abridgment of the *New Standard*. It was first copyrighted in 1897. It was designed chiefly for students in school and college, and contains 61,000 words. Two spellings are given in important cases. There is a chapter on compounds.

The appendix contains a language key in eight languages, a list of proper names, a glossary of foreign words and phrases, a list under the heading Faulty Diction, a vocabulary of disputed pronunciations, a list of abbreviations, a list of degrees conferred by universities and colleges, a table of chemical elements, the Pilgrim Fathers, the United States Presidents, the sovereigns of the world, weights and measures, typographical signs, and signs used in science and commerce.

The Desk Standard, 9" x 6½", 894 pages, contains 80,000 words. It also is an abridgment of the *New Standard*, copyrighted in 1915. It is intended chiefly for desk use in homes and offices, but also for colleges.

It has features similar to the *Students' Standard*, uses the two pronunciation keys, puts proper names, abbreviations, prefixes and suffixes all under one alphabet, and has at the end only a list of foreign phrases.

The Comprehensive Standard, 7¾" x 5½", 712 pages, was copyrighted in 1914. It is suitable for grammar grade pupils. It has

40,000 words under one alphabet and in an appendix a list of synonyms, antonyms and prepositions.

The Concise Standard, 6¾" x 4¾", 583 pages, has 35,000 words including "all words that are sure to be used by the average person in his speaking and writing, with the addition of such words and phrases as will occur in the books, papers and magazines most likely to be read."

There is at the end a list of foreign words and phrases, a list of symbolic flowers and gems, and a list of abbreviations and contractions.

The Concise Oxford Dictionary. This is a book, 7½" x 5¼", of 1064 thin pages, with 50,000 words adapted from the great *Murray* dictionary, by H. W. and F. G. Fowler, authors of "The King's English", for the use of schools and colleges.

It emphasizes common words — such words as the prepositions, the pronouns, and simple words like *hand*, *go*, *put*. *Go* is given more than a page, being compared with *come*, and many of its idiomatic uses discussed as *go by*, *go upon*, *goes well*, etc.

Many illustrative sentences are given to show the different senses in which a word may be used.

The spelling is English, not American, or "non-British." The derivation is given at the end, not the beginning, of each article. Very simple diacritical marks are used, and these only when needed, in a parenthesis following the word. Accent is marked by a turned period (') after the vowel.

This dictionary meets the criticisms of those educators who object to seeing wrongly spelled forms. The complete word with no change except the accent mark, appears in bold face type, unconfused by hyphens, and false spellings. But many American adults will hesitate to confine children to a book which does not sanction *color* and *traveler*.

The Century Dictionary is an American work, founded originally on the English Imperial dictionary by Ogilvie. It is an encyclopedic dictionary somewhat like the French Larousse, the words "and Cyclo-pedia" being included in the title page. It contains ten volumes of

vocabulary, and two volumes which have been included under biographical and geographical reference books—the *Dictionary of Names*, and the *Atlas*. Its chief editor was Professor Whitney of Yale. It was first published in 1891, but has been copyrighted many times since.

It defines about 200,000 words, and is meant to be "a practically complete record of the main body of English speech, from the mingling of the Old French and Anglo-Saxon to the present day". It has considered its first duty to be "collection, not selection." It is liberal in its inclusion of colloquial and slang expressions, and especially of Americanisms, though so marking them.

It has a simple system of diacritical marks and etymological signs, and is scholarly, but not pedantic, in its attitude towards varied spellings and pronunciations. In the definitions of technical terms, "Whenever purely technical interests and the demands of popular use obviously clash, preference has been given to the latter, so far as has been possible without sacrifice of accuracy." Many specialists have acted as editorial contributors.

As to its encyclopedic features, it "covers to a great extent the field of the ordinary encyclopedia, with this principal difference—that the information given is for the most part distributed under the individual words and phrases with which it is connected, instead of being collected under a few general topics".

The illustrations are very clear, and are well labeled.

The Oxford Dictionary, A New English Dictionary on Historical Principles, edited by Sir James Murray, is the greatest of all English dictionaries. It is founded on materials collected by the Philological Society, of England. It will consist, when finished, of ten volumes, containing more than 300,000 words. It is published in numbers, about 450 pages a year, of late years.

The scheme for such a work was suggested in 1857 by Archbishop Trench, author of "Trench on Words", so that more than half a century has been spent on it. This is illustrated by the mention in the preface, among those interested, of Charlotte Yonge, Richard Grant White, and Harriet Martineau. Several hundred volunteer

readers, mounting finally to over 1300, contributed more than three million quotations, illustrating the uses of words from the middle of the 12th century to date, and many editors, some of them also unpaid volunteers, worked up the material.

The dictionary is printed by the Clarendon Press of Oxford. Volume VI, with its inscription to the "Worshipful Company of Goldsmiths", who contributed \$25,000 towards its production, shows that not only scholars were moved to help in the work.

Its aim is "to furnish an adequate account of the meaning, origin, and history of English words now in general use, or known to have been in use at any time during the last seven hundred years". It shows what changes in the forms and meanings of words have taken place, and illustrates these changes, and the different uses now made of the words, by many quotations.

It does not describe things; it explains words.

Its symbols of pronunciation are Roman letters, with the sound values they had when first employed to write English, modified as necessary to represent the sounds of modern English. Each word stands out in bold-face type, and the pronunciation in these strange characters follows in fine type within a parenthesis. Then follow the sources and relationships of the word, and then the historic and present uses in all its meanings and applications.

Order of the Lesson

- (A) Have as many contributions to Exercise XII read as you have time for. And collect the exercise.
- (B) Return Exercise X with comments.
- (C) If you can get a copy for each two pupils of any one dictionary, in the lists under Exercise XIII, do the part of the exercise treating of that dictionary, all working together. After that, or omitting that, let each pupil or each two pupils hold any one book demanded, or let groups work together. With open text-books the work can then be done, the teacher moving about to answer questions. At the end of the exercise, any valuable questions that have arisen may be discussed.
- (D) Assign Exercise XIV for home work.

Chapter 8

How to Use an Ordinary Book

Few of those who read books go to them for definite uses. The housewife may use a cookbook, but she generally relies on memory or on oral instruction. The stenographer uses a dictionary. The policeman carries in his pocket his officer's manual. But most members of what is called the reading public, when they wish information, ask it of someone likely to have it. The habit of referring to books, after over four centuries of book-printing, is not common. The turning over of the newspaper by the shopper looking for bargain advertisements, by the society woman for the marriage column, or by the errand boy for the sporting page, and the well-nigh universal appeal to the telephone directory are the chief reference readings of many people.

Nor do the schools and colleges generally give methodical preparation for this definite use of books. Their courses prepare for the reading of books either for pleasure or for culture. Most people read either to experience pleasure or to acquire vague knowledge. Such knowledge enables its possessor to feel that he is so far acquainted with a subject that he knows what kinds of facts belong to it and can look for them and recognize them. Perhaps the chief purpose of the reading and literature courses in most schools is merely to train students to find pleasure in what gives culture.

There is, however, a technique of reading for definite information which, since it is not systematically taught in schools, should be presented by libraries. At present, each person whose vocation or avocation demands skill in getting definite knowledge from books and using it evolves, according to mental type, his own methods, sometimes at a waste of time and energy.

There are two ways of using the ordinary expository book, according to the purpose of the user. One who is hunting for a fact or a principle for immediate use treats the book as he would treat an encyclopedia or other reference book. One who is amassing much

knowledge with the purpose of knowing a subject as a whole pursues a different course.

The most difficult task in both of these types of reading is, not that of finding what you look for, but that of remembering what it is that you are seeking. The mind is led into many byways of related thought, and returns laden with interesting but irrelevant matter.

To find a fact, even in a text-book, is not so easy as to use an encyclopedia, for many text-books attempt so to present subjects as to lead the mind of the pupil through a development of the subject, rather than to enable a searcher to find any single fact.

Exercise XV For Anyone's Use in Learning the Facts from Observation

(A) Open A Short History of the United States, by Channing.

Look for cases where a third party caused a split in the dominant party, as when Roosevelt and the Progressive Party caused the Republicans to lose, and Wilson, a Democrat, to be elected.

This is a text-book. Will the table of contents give a heading on such a topic? Glance at it. Is there in the front or the back of the book a list of the presidents with their dates of election? Is there a chapter or a table on political parties that will compare them all as you need?

Look in the index for President. Is there any help for you on either page referred to? Look in the index for Parties. Is there anything of value for your search there?

According to the table of contents the book is divided into parts, each part containing several chapters. If you must search through the pages of the book, with what part shall you begin?

Opening the book to page 163, what two helps do you find, within the chapters, to indicate the contents of the chapters so that you need not read them? Watch both of these guides. You are looking for elections. Turn the pages until either a black-face paragraph heading or a small type marginal topic attracts the eye as likely to lead to an account of what you want. Is there anything of value on page 171? When was the next election? Of whom? Is there anything of value

on page 176? When was the next election? Of whom? Is there anything of value on page 194? When was the next election? Of whom? Is there anything of value on page 198? When should the next election have occurred? When do you find an account of another election? What discrepancy is there here? See if by scanning topics and text you can find out why an election has been omitted. Do you think this omission is a defect in the book?

It is evident that this is a laborious task. Even the simplest form of what is called research is thus laborious. Hence the value of knowing how to use books.

You tried, in the index, several words, but did not look for Elections. Is the word indexed? Are there references to all the presidential elections? Why? Look for the first reference in the index on Elections after the point where your search of the pages stopped. Has this material any value for your purpose? If so, make a note of the page.

Continue thus to "run down" this subject without further guidance, by means of the index.

Try the same method with another similar school history. Experiment briefly with a fuller and more complete history. How does the index compare with those of the text-books? How does the text compare? The fuller index of a large book is advantageous, but the fuller text demands more time for its reading.

(B) You wish to know whether the people of the Congo region tattoo their bodies as some other people do at that stage of civilization.

Open *The Story of the Congo*, H. W. Wack.

Look in the index for Tattoo. Look in contents and index for any other word that may lead to this matter, such as ornament. Look through the book at the illustrations. The word applied to the illustration that looks like tattooing is not Tattoo. What is it? Look in the index for Cicatrization.

The illustrations are frequently the best index of a book.

(C) There are many books that do not contain the elaborate aids to analysis furnished by Channing, whose book is a school text, or even by Wack, who has managed to make his pictures fit his text.

To get at a desired fact from a book without those aids, it is necessary to learn how to "skim". Many people know how to skim a novel to get its plot. The process in looking for a fact is much the same.

I wish to know if socialists think that all the property in a country should be divided evenly among its inhabitants. I take from the shelf a pamphlet called "Socialism Summed Up", by Morris Hillquit.

There is no index.

The Contents gives :

- I The Causes that Make for Socialism.
- II The Social Aim.
- III The Trend of Social Development.
- IV The Methods of Socialism.

Which chapter, probably, will answer my question ?

I turn to that chapter. The first paragraph begins, "The socialists demand that the principal industries," etc. The second begins, "The principle upon which society rests is that wealth production," etc. The third tells how the captains of industry feel. The fourth tells about a system of social production. The fifth speaks of a "self-constituted oligarchy". Now, I have not read all of these paragraphs. I have glanced at them, as one glances into a room in search of a friend. Only one paragraph looked promising, and, as it was short, I read it. Which paragraph was it ? Similarly I glance at each succeeding paragraph until my eyes light on, "Socialism, of course, does not advocate a division of wealth". From that point on I really read until the subject changes.

Practice alone is able to give this power. And it cannot easily be attained by a person who finds the mere mechanics of reading laborious. Hence the extreme importance of proper attention to the eyes, and proper methods in training children to read.

Get a friend to cull from books which you select questions for you to find the answers to, until you can do the work rapidly. Or, better, look for something that you really wish to know.

Ask the person nearest you, "What do you wish to know ?" She may say, "How to clean aluminum". Collect the answers to five such questions and run down the information wanted.

(D) The task may not be to find a particular fact, but to collect much material from which later to select related facts for some practical purpose or for an essay or discourse. This process is not a hunt, the following of one scent, but a round-up, the surrounding and coralling of many statements about a larger subject.

You wish to make a comparison between Oliver Cromwell and Napoleon, each of whom filled a throne after the deposition of an hereditary monarch. Evidently, the first thing to do is to read one or more lives of each, with the thought of the comparison in mind.

Begin with Morley's *Life of Cromwell*.

If the book is your own, and the paper used for its pages is rough finish, keep a soft lead pencil in hand, and lightly mark on the margin the passages containing the pith of the paragraphs that seem valuable for your purpose. For instance, let the paragraph be :

"It is one of the mortifications of Cromwell's history that we are unable accurately to trace his share in the events that immediately preceded the trial of the king. It was the most critical act of his history. Yet at nearly every turn in the incidents that prepared it, the diligent inquirer is forced to confess that there is little evidence to settle what was the precise part that Cromwell played. This deep reserve and impenetrable obscurity was undoubtedly one of the elements of his reputation for craft and dissimulation. If they do not read a public man in an open page, men are easily tempted to suspect the worst."

The two sentences that stand out from this paragraph are, "It is one of the mortifications," etc., and "This deep reserve," etc. If the book were of small value, and printed on unglazed paper, pencil marks as suggested would suffice. After marking the whole book thus, only the penciled portions should be reread, for use in mental or written notes. This, however, is a handsome book, and the paper is sufficiently glazed to be marred by even the softest rubber eraser. Hence, a supply of long, narrow paper strips should be used, and one inserted wherever these important passages are to be reread. The strip here inserted would be penciled, "p. 253 - par. 1 - It is one — . This deep — ." If the bookmark gets lost it can be replaced. When the book is reread, the notes can be destroyed. To make these notes in a note book means more inconvenience than the use of book marks.

Several books may be thus marked on the first reading, and all reread at once when the outline of your essay is to be made.

(E) Write, briefly, what has been your habit in reading for information, and what are its advantages and disadvantages over the method here suggested.

Note for Teacher of a Class

There can be no summary of this chapter, nor can the lesson as given here be conducted without change, unless the class is supplied with Channing, Wack, etc. If there are several United States histories distributed among the pupils, the same question may be hunted down in each, pupils showing on the blackboard what leads each is following. A pupil at the front of the room holding a book can show what she is doing. The teacher would better do Exercise XV (C).

Then books on general subjects should be passed out, each pupil should write out a question from the book given her, and pass the book and question to her neighbor who must find the answer to the question from the book.

Exercise XVI For Classes Using this Book

(A) Find the answers to five of the following questions from the books designated, noting the page on which the answer occurs, and the edition from which it was obtained.

1. What style of architecture was characterized by the round arch? Modern History. West.

2. What moral lesson can be drawn by a consideration of the organic degeneration of certain crustaceans? Natural Law in the Spiritual World. Drummond.

3. With what oriental proverb does Farrar elucidate the unwillingness of some Jews to believe that Christianity took precedence over the Mosaic law? Life and Work of St. Paul. Farrar.

4. Among what primitive people was it customary, in divorce, for the wife to take the sons and the husband the daughters? Ancient Society. Morgan.

5. What was the amount in the Persian Treasury when Shuster took control of it? The Strangling of Persia. Shuster.

6. Where does Tyler speak of the effect of the development of eyes in the animal kingdom? *Man in the Light of Evolution*. Tyler.

7. Who was the real ruler of England when the present Liturgy was adopted? *History of the English People*. Green.

8. When and where did Cromwell's troops get the name of "Iron-sides"? *Oliver Cromwell*. Morley.

(B) Read a magazine article, pamphlet, or small book, marking its topic-sentences, reread these sentences only, shut the book, and write a resumé. Open the book, and compare your resumé with the sentences marked.

Order of the Lesson

(A) Return Exercise XII, A and B. Have a brief discussion of what was said under B.

(B) Collect Exercise XIV.

(C) Have early paragraphs of this lesson read, and conduct Exercise XV, A and B orally, as suggested in the Note to Teacher. Conduct C yourself. Have a paragraph answering D written in class by each student.

(D) Give out Exercise XVI to be written and brought in for the next lesson.

Chapter 9

Books containing Extracts from many Books

People frequently consult dictionaries of quotations for certain special sayings with which they are partially acquainted. Many of these dictionaries are often elaborately systematized and indexed to meet this need. Such books, and anthologies also, are much used by writers and speakers who wish to adorn or reinforce their own opinions with the words of others. Every household library should have one such book. The large libraries have many. The student and reader visiting a library only occasionally should know that there are such books, and should be reasonably expert in their use.

Exercise XVII For Anyone's Use in Learning the Facts from Observation

(A) Collect as many as are available of the following:

Poetical Quotations. Allibone.

Prose Quotations. Allibone.

Familiar Quotations. Bartlett.

The International Cyclopedia of Prose and Poetical Quotations. Walsh.

Cyclopedia of Practical Quotations. Hoyt.

Answer as many of the following questions as you can:

Which of these books contain foreign as well as English quotations? Are these foreign quotations translations or in the original? Which contain prose alone? Poetry alone? Both prose and poetry? Which was, apparently, first compiled? Which bears the latest copyright date? Which are arranged alphabetically, according to subject? Which have lists of authors? What information is given about the authors? Which has an index of first lines? Is it valuable? Which has a chapter of proverbs in English? Of mottoes in French and Latin? Which has a separate list from anonymous books? Which is arranged according to authors? Are the authors arranged alphabetically? In what order are they given?

(B) *Hoyt*. Look under *flags*, p. 214, example b. Do you find the same quotation in the index under *mariners*? Do you find the same under *Campbell* in the list of authors?

Find in the topical index a cross-reference from *guest* which leads to the English, the Latin, and the modern foreign language indexes. In which of the three references is there a good quotation to use under the caption *guest*?

Bartlett. If you seek for *Sir Thomas More* will you find him in the index? See p. xv. In what way is he mentioned in this book?

Look in the index for the *inconstant moon*. Do you find it under *inconstant*? Under *moon*?

In *Hoyt*, under the subject *habit*, you find "A man used to vicissitudes is not easily dejected".

Can you find this quotation under *habit* in *Bartlett*? Try *dejected*; try *vicissitudes*. What kind of arrangement is missing in *Bartlett*?

Allibone's Prose and *Allibone's Poetry*. Under *tears*, you find,
"The broadest mirth unfeeling folly wears,
Less pleasing far than virtue's very tears".

If you remember only that the quotation compares *folly* and *virtue* can you find it by looking for these words?

Walsh. To what part of other dictionaries of quotations does the Concordance of Walsh correspond? Make a list of the authors considered important enough, and occurring frequently enough, to be designated by signs. Look for the use of these signs.

(C) An anthology is a "collection of the flowers of literature." There are many such collections in a good library. They are variously used. Writers, elocutionists, students of literature, speakers and teachers find frequent need for them.

The most useful reference work for the users of such collections of poetry is the book commonly called "Granger".

Collect as many as possible of the following:

Index to Poetry and Recitations. Granger. c. 1904

New Library of Poetry and Song. Bryant. c. 1900

Household Book of Poetry. Dana. c. 1890

Home Book of Verse. Stevenson. c. 1912

American Anthology. Stedman. c. 1900

Victorian Anthology. Stedman. c. 1895

Victorian Anthology. Grant-Duff. c. 1902

Oxford Book of English Verse. Quiller-Couch. c. 1901

Granger. Who is "Granger"? How many volumes did she index? How many titles? Look at the explanatory note and key to symbols. Look in the first line index for a poem beginning, "So fallen! So lost!"

Who wrote it? What is its title? Look for it in the title index. In what eight books is it listed? Look in the author index. How many selections by the same author are included in Granger?

Bryant. What is the date of the first publication of this book? Of revision? Under how many chief subjects are the contents classified? What are the subheadings under Sentiment and Reflection?

On pp. xii and xiii what three classes of illustrations are listed? Examine some of the poems on the "reverses" of the Homes of the Poets. Are these poems by, or about, the poets whose homes are shown? On p. xvi what manuscript facsimiles are listed? Examine the three on p. 74. Which wrote more legibly, Poe or Stedman? Does that surprise you? Why?

Does the index of authors and titles enable you to find an author at once? A title? Examine the list of recent poets, and see how many you know. Is there an index of titles? What other index is there? Turn the pages of the book to see how many of the poems or fragments are familiar to you. If you were compiling an anthology, would you use fragments?

Dana. What is the date of copyright of this book? Of publication? How do Dana and Bryant agree as to their method of classification? What indexes do you miss in Dana? What does the appendix include?

Stedman's American Anthology. Does Stedman pretend to have gathered here immortal gems? See the introduction. According to the table of contents in what order does he group the poets? In

what part of the book are the biographies placed? In what order are the biographies given? What three indexes are there?

The Victorian Anthologies. Which of these anthologies was first published? Which is by an Englishman? Who is Stedman? Where are the biographical notes in Grant-Duff? In Stedman? Choose five poems from Grant-Duff, and look for them in Stedman. Choose five from Stedman, and look for them in Grant-Duff. Which search was easier? Why?

The Oxford Book. Did Quiller-Couch choose as Stedman chose, or did he take the best? See the preface. Did he, as did both the Victorian anthologists, use only verse written in England? Do the numbers in the index of authors refer to pages or to the numbers of the poems? To what do the numbers refer in the index of first lines? Is there any index of titles?

Stevenson. What is the first name of the compiler? What were his purposes in collecting this volume of verse? What is a compiler? According to the table of contents, does this work classify the material as did the other anthologies? What is the difference? Are all the poems in the appendix represented by translations or paraphrases in the body of the book? What is the difference between a paraphrase and a translation? What information is given in the index of authors? What other indexes are there? From either of the other anthologies select five poems and look for them here. What is the peculiarity of the paper used in this book? Why?

Exercise XVIII For Classes Using this Book

1. Who says that inquisitive people are the "funnels of conversation?"
2. What reason did Spenser give for the widely spread knowledge of the Roman language?
3. What is the Latin for: "The Gods my protectors?"
4. Where does Shakespeare declare that the doing is of more value than the result, or words to that effect?
5. Where is love compared to the stone that Sisyphus rolled up the hill?

6. What is the correct rendering of the misquotation: "When Greek meets Greek then comes the tug of war?"

7. Who says, "I never use a big D?"

8. Is it Spenser or Raleigh who speaks of a "Staff of faith?"

9. Who wrote "La Belle Dame Sans Merci?"

10. What poem is there about the playing of "Home, Sweet Home" in the midst of war and its effect on the soldiers of the two hostile forces?

11. Who rhymed *trovatore* with *purgatory*?

12. Who wrote a poem about a poor little boy named Jim, and in what collection can it be found?

13. Find three poems about daisies.

14. Who prayed for a time,

"When the Rudyard's cease from Kipling,
And the Haggards ride no more?"

15. What poet wrote in a poem the argument from nature up to nature's God; from effect to cause?

Summary of Information in this Chapter

A good book of quotations should have many short quotations which can easily be found, by subject, by author, and by important words. There are books containing quotations from foreign languages, and collections of quotations especially adapted to sermon writers.

Poetical Quotations. *Allibone*, contains extracts from Chaucer to Tennyson, arranged alphabetically by subject, and indexed by authors, by subjects, and by first lines. There are 13,600 quotations.

Prose Quotations. *Allibone*, contains extracts from Socrates to Macaulay, arranged alphabetically by subject, and indexed by authors and by subjects. There are 8,810 quotations.

Familiar Quotations. *Bartlett*, as revised by Cole, contains extracts from both prose and poetry, down to 1914. It is preceded by an index of authors, and a list of anonymous books, and is arranged chronologically under authors, the dates of the authors being given in the body of the book. Its pages contain many cross-reference notes. It has an appendix containing a number of catch phrases, arranged alphabetically by the first words, and traced to their sources. It has an

ample index of important words, which gives it its chief value as a reference work.

Encyclopedia of Quotations. *Walsh*, is a well indexed, one volume book, with a topical, cross-referenced index at the beginning, and a catchword index at the end. It includes quotations from English, and translations from authors in several foreign languages, all under one alphabet.

Cyclopedia of Practical Quotations. *Hoyt*, is a larger book than any of those above listed. It contains some prose and much poetry. It is arranged alphabetically by subjects, and under each subject, alphabetically by authors. The quotations are preceded by an elaborate topical index with cross-references. It has a section containing quotations from foreign languages, arranged alphabetically by subject in English, each quotation followed by an English translation, and a selection of mottoes in Latin and French arranged alphabetically by first words. There is also an index of Quoted Authors with dates and slight characterizations, and at the end is a copious concordance giving the page, the position on the page and the author, if he is one of eight authors distinguished by signs, of each quotation.

An anthology contains a collection of whole poems or large fragments. Popular anthologies contain either such poems as the compiler considers the best, or such as he thinks the most popular.

Anthologies and collections for recitations are so many, that a book has been made indexing over 300 of them.

Index to Poetry and Recitations. *Granger*, is a large book of over 900 pages. It indexes over 30,000 titles. Its explanatory note and Key to the symbols used should be studied before the book is used. It consists of a title index, an author index, an index of first lines, and a list of selections suitable to special days.

New Library of Poetry and Song. *Bryant*, is a collection of poems and fragments representing over 700 authors, both English and American. These poems are classified, but not alphabetically, so that the table of classification is placed at the front of the book. There is an introductory essay by William Cullen Bryant on "Poets and Poetry of the English Language," an alphabetical index of authors, giving

birthplace and dates for each, and titles of poems under each also in alphabetical sequence.

The selections are followed by an index of titles, an index of first lines, and an analytical index of quotations from the poems. The book is illustrated.

Oxford Book of English Verse. Quiller-Couch, contains "the best" poetry from the thirteenth to the end of the nineteenth century. The poems are arranged chronologically by authors, and each poem is numbered. There are an index of authors and an index of first lines, both referring to the numbers of the poems, not the pages.

Household Book of Poetry. Dana, is an old book, containing "whatever is truly beautiful and admirable among the minor poems of the English language." Every poem is given entire. The material is arranged by subject, but not alphabetically. An index at the front of the book follows this subject arrangement. There is an index of authors, with brief notes. An appendix contains a few Latin poems.

Victorian Anthology. Duff, contains selections from English poets who wrote in Victoria's reign. It includes fragments. The compiler groups the poets chronologically and gives several pages of biographical notes before the poems of each group.

Victorian Anthology. Stedman, was published earlier than that of Grant-Duff. The purpose is to "make a truthful exhibit of the course of song" in one nation during one reign. He divides the reign into periods, classifies the poets under each period, and gives the poets chronologically under each class. He includes in a separate class colonial poets. The poems are followed by biographical notes, and there are indexes of first lines, of titles, and of poets.

American Anthology. Stedman, gives selections from 1787 to 1900. It seemed to the compiler "to afford a view of the successive lyrical motives and results of our first hundred years of song." The table of contents is an elaborate classification of the poets, partly chronological, and partly literary. The poems are followed, as in the Victorian anthology, by biographical notes and three indexes—of first lines, of titles, and of poets.

Home Book of Verse. Stevenson, contains both American and English poems, and covers the period from 1580 to 1912. It attempts to "bring together the best short poems in the English language"—together with much verse that has "the distinction of wide popularity." The table of contents shows the arrangement is by a popular rather than a literary or chronologic classification. An appendix contains a few famous poems from other languages translated or paraphrased in the body of the book. There are three indexes, the names in the index of authors being followed by very brief biographical notes, chiefly dates and places.

Order of the Lesson

(A) Distribute as many copies of as many of the books called for as are available. Let a pupil read aloud the questions in Exercise XVII, and, two pupils using each book, have these questions answered from open books, discussing the answers freely, the teacher acting as umpire, and reference being made to the Summary by all the pupils who have none of the books which are discussed. Wherever the Summary seems deficient, make notes of the defect, and let a student be deputed to write to the authors about it.

(B) Return Exercise XIV to class with a few comments.

(C) Have Exercise XVI passed among pupils, and let the teacher, having the books referred to on the table before her, ask for answers. If all pupils agree, let them mark each other's papers correct. When they do not agree, teacher can look at and have read the passages in dispute. If the teacher is not sure on any point drop it until the next lesson.

(D) Assign Exercise XVIII to be brought in for the next lesson.

Chapter 10

How to Use Books about People

Current Biographies

Exercise XIX For Anyone's Use in Learning the Facts
from Observation

Look in any modern encyclopedia for William Howard Taft. Do you find an account of his life? At what date does this account end?

Procure as many as possible of the following:

Who's Who in America - 1910

Who's Who in America - 1915

Who's Who - 1915

Wer Ist's - 1914

or any later year for the last three.

Find Ex-president Taft in Who's Who in America, 1910. What is the last event of his life there mentioned? Find him in Who's Who, 1915. Is the article as full or as up to date as that in Who's Who in America for the same year? Glance at the introductory note and the index to advertisements in Who's Who to see where it is edited. Find Taft in Wer Ist's.

Look in Who's Who in America for Horace Dutton Taft. What is his relationship to W. H. Taft? Is he in Who's Who? Why not?

Look in Who's Who for Rabindranath Tagore. Do you expect to find his name in Who's Who in America? Why? Look for Tagore in the Cyclopedia volume where you found W. H. Taft. Is he there? Why?

Would you expect to find Emerson in any late volume of Who's Who in America or of Who's Who? Why?

Make a general statement as to the number and the quality of persons whose names can be found in Who's Who, in Who's Who in America, and in a good modern encyclopedia.

It may be well, if in a large library, to glance at:

Who's Who in New York

Who's Who in New England

Catholic Who's Who
Canadian Who's Who
Qui Êtes — Vous ?
Woman's Who's Who in America
Who's Who in Japan
Who's Who in Science
Who's Who in the Theatre
Who's Who in Art

and other books of contemporary biography such as "Kelly's Handbook to the Titled, Landed, and Official Classes," merely to know that such books exist, and may be consulted in case of need.

Collected Biographies

If you have access to a large library, take any volume of any series of collected biographies, select at random five persons there mentioned, and compare with any good encyclopedia as to the number of names given and the length of the article on each. Look especially at contents, indexes, appendixes, prefaces, etc., of each such collection before using.

Collect as many as possible of the following:

Appleton's Cyclopedia of American biography
Chambers' Biographical dictionary
Lippincott's Universal pronouncing dictionary of
 biography and mythology
Allibone's Critical dictionary of English literature
 and British and American authors
National cyclopedia of American biography
Century Cyclopedia of names of American
 men of science
Dictionary of national biography

Appleton's Cyclopedia of American Biography. Who were the editors? When was the book copyrighted? With what works does the preface rank this series? Of how many volumes does it consist? What classes and nationalities does it include? What names that you know are included among the contributors? What is the "supplement" at the end of vol. VI? Under what article, in what volume,

on what page, is the invention of an adding machine treated? What names does vol. VII include? Who was called the "Blind Preacher"? When did August Belmont, the financier, die?

Chambers' Biographical Dictionary. Can you find a date for this book? Look through the preface. Who wrote "Black-ey'd Susan"? See index. Who was called "Dizzy"? Who was "Hugh Conway"?

Lippincott's Dictionary of Biography. When and how often was the book copyrighted? How many volumes does it include? What does the appendix to the last volume contain?

Allibone's Dictionary of Authors. To whom does the author dedicate his last volume? When was the book printed? Look for what is said of John Taylor, "The Water Poet." How many Taylors are noted in the volume? How thoroughly did Allibone do his work?

The National Cyclopaedia of American Biography. What is the sub-title of this work? Who edits it? When was it copyrighted? How fully is it illustrated? With what? What do you get with each portrait besides the face? Where is the index? What is its value?

Century Cyclopaedia of Names. For what other purposes besides biography may this book be used? Of what great work is it a part? What is the copyright date? Of what does the appendix treat?

Dictionary of National Biography. Look at Vol. I. Who was its editor? At Vol. XXII. Who were the editors? At Vols. XXVII and LXIII. Who was their editor?

Turn to the prefatory note in supplement, Vol. I. What was the main purpose of the supplement? With what date of death did the supplement end its consideration of names? Why? At what rate do people distinguished enough to be included in this dictionary normally die in England? What is the principle on which a name is included? Read the last section of the life of George Smith. Why should so much have been said of him?

Look at the preface to the Index and Epitome. How many of the names treated in the original 63 volumes are contained in this Epitome? Is the type the same? How much is said on each in the Epitome? Why is this Epitome called an Index also?

Look at the Preface to Errata. How many facts and dates were given in the dictionary with its supplement? Does this volume supply new matter, or only corrected errors?

Look at the title page of the Second Supplement, Vol. I. What, apparently, has happened to the editor? Look at the prefatory note. How many names were added in eleven years? That gives how many a year? How does that compare with the normal rate as indicated in the prefatory note to the first supplement? What proportion of the persons included in this volume are women?

Look at the preface to the Index and Epitome for the second supplement. Are the notes here fuller or scunter than the first Epitome?

National Cyclopaedia of American Biography. How many volumes are there? Look at the introduction to Vol. I. What sort of people are included? On what principle is the book made? What is the date of Vol. I? Of Vol. XIII? Of the supplement? In what order are names placed? How is the work indexed?

Examine the conspectus in the Index volume. Make a list of the facts there grouped.

Write a paragraph comparing this work with the Dictionary of National Biography.

American Men of Science. Who is the editor? When was the book published? What persons are included? Why?

Exercise XX For Classes Using this Book

1 When did Abraham Lincoln die? What was his attitude toward children?

2 Whom did Eleanor Hallowell Abbott marry?

3 What difference of opinion is there between *Who's Who* and *Who's Who in America*, 1912, as to the address of Mrs. Hetty Green?

4 Who was the originator of the English railway guide books called "*Bradshaw*"? What were his philanthropic interests?

5 Who was the ancestor of the American family of Hales?

Where and when did he land? What other American Hales have been famous? What for?

6 In what branch of science have American scientists chiefly specialized?

7 How do Pennsylvania and Massachusetts compare in the number of scientists that they have produced? What becomes of the scientists whom New York produces?

8 Who is Arne Garborg?

9 What did Mrs. Sarah Josepha Hale write?

10 In what year did Mark Twain publish *Eve's Diary*?

11 Who wrote Bryant's *Pocket Manual of Homeopathic Medicine*?

12 Who were the two Sarah Brownsons?

13 What literary references have been made to the educational work of Gunn?

14 Who was the first secretary of the Children's Aid Society?

Summary of Information in this Chapter

Biographies are the more difficult to find the nearer they are to being contemporary.

Who's Who. There are a number of biographical year books, most of which bear some variety of the title *Who's Who*.

Who's Who in America for 1915. It contains in almost 3,000 finely printed pages much abbreviated biographical data about American men and women of note. Each article gives the name, date of birth, the occupation, the parents, life history, works, titles, distinctions, clubs, and residence of its subject. *Who's Who* for the same year. It is published in London, and is the 67th issue of this annual. It is about as large as the American book and contains notable people of the world.

Wer Ist's. This is a similar German annual. There are also many *Who's Who* annuals of special classes and professions, as *Women*, *Scientists*, *New Englanders*, etc. *The American Blue Book of Biography* for 1914 contains thirty thousand brief biographies of Americans.

Collected Biographies. The same S. Austin Allibone who compiled the books of prose and poetical quotations, published over a half century ago a dictionary of authors called *A Critical Dictionary of English Literature and British and American Authors*. This contains biographies of over 46,000 authors, with opinions of their works by literary authorities. The book, although so old, has never been replaced. Its volumes occupy an honorable place on the shelves of every library of sufficient size or age to possess them.

Century Cyclopaedia of Names. This is the twelfth volume of the Century Dictionary, and contains many biographies of celebrities not only dead, but living.

Chambers's Biographical Dictionary, an English book, was reprinted in 1911, and contains, in one volume, a large number of biographies of "The Great of All Times and Nations."

Lippincott's Pronouncing Dictionary of Biography and Mythology is an American book, published first in 1870, often revised, and brought up to 1915. It consists of two large volumes. Its first volume contains a chapter on 20 languages, including their pronunciation.

Appleton's Cyclopaedia of American Biography. This is an encyclopedia in six large volumes, containing over 15,000 names of native and adopted citizens of the United States, of several thousand citizens of other American countries, and of nearly a thousand persons of foreign birth closely identified with American history. It is a handsomely printed and bound book of reference. There is a later volume, containing names of Americans who gained renown in the Spanish war and in other ways, after the first six volumes were published. This volume has an exhaustive index.

Dictionary of National Biography. This consists of 63 volumes, which were published quarterly during more than fifteen years, beginning in 1885, and the nation whose great people are here enshrined is England. There is also a complex system of supplements, supplying omitted names, and names of people who died while the book was being published—for no living people were included. There are, then, 63 volumes of the original work, 3 volumes of supplement, a volume

called Index and Epitome, containing all the names in these 66 volumes very briefly treated, a volume of Errata in these 66 volumes, 3 volumes of a second supplement, brought down to 1911, and an Index and Epitome of this second supplement. Over 32,000 names are treated in the whole series.

The principles on which names were chosen were, that they should "embrace all branches of the nation's and empire's activity," and that the right of a person to notice should "depend on the probability that his career would be the object of intelligent inquiry on the part of an appreciable number of persons a generation or more hence."

The first volume of the supplement contains a memoir of the publisher, George Smith, showing the seriousness of such an undertaking from the financial, the literary, and the patriotic standpoints.

National Cyclopaedia of American Biography. This consists of 13 volumes of biographies, including "all persons", living or dead, "connected with the history of the nation", in all the walks of life. "The ideal of a biographical cyclopaedia is one which anticipates the information demanded about new men as they come into prominence." The first volume was printed in 1892, the Index in 1906, and a supplement, bringing the work up to date, in 1910.

The persons noticed are grouped, not alphabetically, "but with reference to their work and its results." There is, however, at the end of each volume, an Index, giving the volume and page on which each name appears. And there is an index volume containing all these names again.

This index volume bears also the title *Conspectus*. And under this head a great deal of statistical and classified information is given, including: Delegates to the colonial congresses; Presidents and other officials of the United States; Members of the Congresses; Governors of States, Chief justices and U. S. senators arranged chronologically; Presidents of Universities; Heads of religious and other societies; Scientists, Philanthropists; Americans mentioned in literature; public statues; notable sayings of famous Americans; last words; and a calendar of anniversaries.

American Men of Science. This book is a directory of living men of

science, edited by Professor Cattell, published in 1910 by the Science Press of New York and intended chiefly to "make men of science acquainted with one another and with one another's work."

Order of the Lesson

(A) Return Exercise XVI to the class with comments.

(B) Have Exercise XVIII passed. Let pupils read answers to questions, telling how they found them. When all agree, have answers marked correct. Where there is disagreement, teacher may have the work done under her guidance. But no long time should be taken. Better to throw the matter back to a committee for investigation and report. Collect papers, for teacher's inspection, to be returned at next lesson.

(C) With as many copies as are obtainable of the books mentioned under Exercise XIX, distributed, and open, have the questions read by one pupil and answered by the others, those pupils without the books holding this book open at the summary of the lesson. The teacher may act as referee, and any fault in questions or summary should be noted, a pupil being deputed to write of the defect to the authors.

(D) Assign Exercise XX to be brought in at the next lesson.

Chapter 11

How to Use Books about Places

Exercise XXI For Anyone's Use in Learning the Facts
from Observation

Atlases

Everyone knows the fundamental facts about the ordinary map,—the directions, the symbols for mountains, rivers and cities, the parallels and meridians to show latitude and longitude. To use a popular reference atlas, a little more is needed.

Collect the following:

Ginn's Classical Atlas. c. 1886

International Reference Atlas of the World. n. d.

Century Atlas. c. 1911

Ginn's Classical Atlas. In what year was it printed? In what year was the preface written? Is the date an important matter? Why?

Page 3: What are the present names of the regions that Homer knew? In what country was the Land of the Cyclops? In what sea was the Floating Aeolian Island? In what direction from Greece lived the Lotos Eaters? The Pygmies? By what was the world surrounded? Page 6: To what scale was this map drawn? Which is longer, an English or a Roman mile?

What text is added after the maps of this atlas? Page 2 of this text: What mark is used to indicate battlefields?

Find the index. Where are the abbreviations explained? Does the index follow alphabetically the ancient or the modern names? Does the index aid in pronunciation? On how many maps may Achaia be found? Turn to map 12. Find on the upper margin the letter H. Find on the right margin the letter d. Move the pointer westward from d until it is directly south of H. Is this Achaia? Under what marginal letter is Achaia in map 15? Compare map 14 with the shape of Achaia in map 12, to verify the region. Can you expect all the maps in a classical atlas to apply the same name to the same place? Why?

International Atlas. When was this book printed or copyrighted? Is this an important matter? Where was it printed? Look at the lower right corner of a map to find where it was engraved.

Frontispiece: What is a frontispiece? What parts of the world have been thoroughly surveyed? Find a region which has been mapped by compiling numerous surveys. Which has been sketched from a single report? Where are there regions unexplored? What are the contents of p. 5? p. 6? What does Casa mean in Spanish? Stan in Persian? How would you go from Liverpool to Athens? From what two English ports might you sail for Colombo? Which gives a choice of routes? Of how many? On p. x, why has the Col. de Géant one accent in the original word and another in the respelt word? What does Col. mean?

Map 1: Why is the snow line higher in Chimborazo than in Beeren Berg? Look in index for each, and find its latitude and longitude. What does Vertical scale here mean? What parts of the world are well forested? What part of the world has no deserts?

Maps 1 and 2: Do these represent the same regions? How do they differ? What is a Mercator projection? See dictionary. Where is the term used on these maps? What is a nautical mile? Where is the term used? Which empire of the world is most widely scattered? Where are its parts?

Maps 4 and 5: On which side of the Atlantic Ocean does the drift ice from the north extend farther southward? About which pole is the unexplored region the greater? What explorer reached the north pole? The south pole?

Maps 6 and 7: Which is longer, an English statute mile or a kilometre? What is a statute mile? What is the difference in scale between the main map and the inset map? How wide is the peninsula of Gibraltar?

Maps 8 and 9: Where do the railway lines of Germany centre?

Maps 14 and 15: Compare the Wash with the mouth of the Humber. Into which do many steamships come? What evidences of soundings are visible?

Century Atlas. Preface: On what are the United States maps based? Those of England? Where have the figures for depths of water been

obtained ? What are contour lines ? What sorts of places have been included ?

On map V, what five maps include all or parts of Italy ? What do maps VI and VII show ? Maps VIII to XIV ? What story is told by map XV ?

Modern maps, Map 1: Where does the Gulf Stream seem to begin and end ? What is the greatest world empire ? What are its chief parts ? Where and what is the International Boundary Line ?

Map 2 : Where are the deepest parts of the sea ? The highest parts of the land ?

Map 3¹/₂ : Trace Shackleton's route. Who discovered the south pole ? When ? Locate West Antarctica on the map by its longitude. Near what grand division is it ?

Map 4 : Follow the voyage of Ponce de Leon. What coast did he visit ? When ?

Map 5 : Do Columbia, S. Carolina and Atlanta, Ga. have the same time ? Should they ? Between what nations is the International Boundary Line as it runs through Bering Straits ?

Map 5a : Can you go from New York to Portland by trolley ? How much of the way runs near the sea coast ?

Map 6 : How high above the sea is Mansungun Lake ?

Maps 7 and 8 : How do Hampton, South Hampton, and Portsmouth compare in importance ? How does the water to the east of Cape Cod peninsula compare in depth with that to the west ?

Map 64 : Between what places does the submarine telegraph run connecting Mexico and the United States ?

Map 86 : What criticism can you make of this map ? Prove your point by an example . Between what figures is the population of Rat-isbon ?

Map 92 : Find a live volcano .

Map 118 : What is the area of the Hawaiian Islands ?

Index : What is the first name in the index ? On map 80, find H in the upper margin and 2 in the side margin, and following from one south and from the other east or west, find the square in which the Aa occurs. Into what does the Aa flow ? What do the letters c. h. after Abbeville, S. C., mean ?

Gazetteers

Collect as many as possible of the following :

Dictionary of Greek and Roman Geography. Smith c1878

Harper's Dictionary of Classical Literature. c1896

Chamber's Concise Gazetteer of the World. c1907

Century Cyclopedia of Names. c1911

Lippincott's Gazetteer. c1911

Automobile Blue Book.

Dictionary of Greek and Roman Geography. Who wrote this book ? Where was it published ? When ? What other dictionaries did its editor publish ? Do you find any maps in the book ? Read any short article and see if you can explain the references in it. Are the articles signed ?

Harper's Dictionary of Classical Literature. Choose any place mentioned and look for it in Smith also. Choose any place mentioned in Smith and look for it in Harper also. Compare the two treatments. Which suits you better ? Why ? Make out from Harper a few questions, the looking up and answering of which ought to make a student familiar with the book.

Chambers's Gazetteer. What do you think about the probable age of this book ? Why ? When was it printed ? Can a copyright run out ? See Cyclopedia. Look for Aa. Is it treated fully ? Could you find it easily ? Is any map provided on which you might find it ? Is Abbeville, S. C. mentioned ? How many facts are given ?

Is there an index or appendix to this book ? What does it contain ? Up to what date are the discoveries brought ? Does this prove that the whole book has been brought to as late a date ?

Century Cyclopedia of Names. Count on any two pages of this book the number of names of places, and see what proportion these names bear to the whole. Find Battersea Park. Should you expect to find this listed in a gazetteer ? Is it in Chambers ? Is there anything geographic in the appendix to the book ?

Lippincott's Gazetteer. When was this volume printed ? Who were its editors ? What can you find about the real age or newness of the

book? How many volumes are there? Look for Aa. How fully is it treated? How many Abbeilles do you find? What does the appendix contain? What is a conspectus?

Automobile Blue Book. Read, and follow by finding examples, the page on How to Use the Blue Book. Are the advertisements in the book an advantage or a disadvantage? Why?

Is there an atlas or gazetteer devoted to your state? What is its name? Have you seen or used it?

General Geographic Information

Collect the following:

Stanford's Compendium of Geography and Travel.

Baedeker's United States.

Stanford's Compendium. How many volumes are there? Where were they published? When printed? What is the date of the preface? Is any copyright date mentioned? Is this important? Are there any maps? Illustrations? Is there an index? What is it that has caused us to separate the Basques from the French and Spanish?

Baedeker. When was this book printed? Copyrighted? Read the preface. Read as much as will interest you in the introduction about railways, to see what sidelights on European travel you can get. Look, for the same purpose, at the glossary on p. 26. Glance at the articles (monographs) of the introduction, such as those on History, Physiography, and notice the authors. Look at the index for any place with which you are familiar, and see what is said of it in the body of the book.

Make, briefly, a similar survey of Baedeker's Great Britain, or Terry's Mexico, and notice what other similar guide books are in the library. For teachers and students of geography, and for the writers of papers on prospective or retrospective travels these books are very valuable.

Exercise XXII* For Classes Using this Book.

1. What is the modern name of the Anio River? What has become of its lakes?
2. Where was the cenotaph of Euripides?
3. What and where was Germania Barbara?

4. In the days of Homer, what was the supposed relation of the Caspian Sea to the Black Sea and the Persian Gulf?
5. How many Roman miles from Alexandria to Jerusalem?
6. What is the length of the usual route from Dublin to Liverpool?
7. What national park is there in the Province of Ontario?
8. What is the southernmost cape of Tasmania?
9. What is the latitude of Walcheren Island, and to what nation does it belong?
10. In what part of Jerusalem is Moriah?
11. What shape was John o'Groat's House?
12. What are the prevailing sedimentary rocks in the Atlas Mountain region?
13. Where did David Livingstone die? Name four other African explorers.
14. What portions of the United States have not been covered by automobile blue books? See map.
15. Find the way to motor from Whippany, New Jersey, to Metuchen.
16. How long is a motor trip from Old Point Comfort, Va., to Greensboro, N. C.?
17. Name the locks on the Manchester ship canal. Was this a municipal enterprise?
18. Next to England, what nation carries on the chief trade with India?
19. How many places called Cleveland are there in the United States?
20. What is the elevation, above sea level, of Simla?
21. What is the difference in this country between a hotel on the American plan and one on the European plan?
22. How many islands are there in Lower Saranac Lake?

Summary of Information in this Chapter

Ginn's Classical Atlas was first made by A. Keith Johnston, a Scottish geographer, more than half a century ago, and was revised almost thirty years ago. Although scholars may find out more about them, the

facts told by an atlas of this sort change very little. Schools and colleges chiefly use these maps. By a system of letters on the margin, places may readily be found. 13Bc in the index after a name means map 13, south of the letter B in the upper margin, and east of the letter c in the left margin. There are several aids to the student, so that even those who have not studied the ancient languages can use the maps. The scales on which the maps were made and scales of both English and Roman miles are provided so that distances may be measured.

The International Reference Atlas is published in London, its maps made in Edinburgh, by J. G. Bartholomew, "geographer and cartographer to the King," and head of the Edinburgh Geographical Institute. Like many English books, it bears no date, which is unfortunate for the reader, as many of the modern maps may go out of date in a year. The user of the maps should refer carefully to explanations on each map and at the front and back of the book and the dictionary and encyclopedia should be used in connection with the atlas by those who are educating themselves by the help of the book. The maps are wonderfully clear and yet very full. Places are located, not by marginal letters, but by latitude and longitude, in the excellent index.

The Century Atlas is volume 12 of the Century Dictionary. Its maps are based on the best authority, contour lines are given in the United States, and a great deal of historic information, ancient and modern, as well as astronomical, is given. The user should differentiate the maps at the beginning of the book numbered in Roman numerals from the modern maps numbered in Arabic figures. There is an index after each set, and places are located by means of marginal letters. XIII M7 means, look on Map XIII, south of M in the upper margin, and west or east of 7 in the right or left margin. A great deal of information can be obtained from the maps if the explanations on them are read. The scale in English miles and in kilometres is given, and most of the symbols used in the maps are explained.

A Dictionary of Greek and Roman Geography, by "various writers" and edited by Sir William Smith, is an old, but learned book in two

volumes. Its articles bristle with references. It contains a few maps and plans as illustrations, but much text is taken up in elaborate descriptions of what maps show. It can be used by intelligent laymen, but is intended for scholars.

Harper's Dictionary of Classical Literature, edited in 1896 by Harry Thurston Peck, a Latin professor at Columbia University, contains "the names of all countries, states, cities, and other localities that are mentioned by the most read of the classical writers." It contains some maps, diagrams, and illustrations, and is easily understood by anyone who wishes to consult it.

Chambers's Concise Gazetteer is a book, printed in Scotland, and bearing a date of printing. The preface assures us that the facts in the revised issue have, when possible, been "brought down to the early year of the new century". It is in one small, easily handled volume. At the end there is a list explaining the meanings of place names, and some tables of distances, populations, though without date, and dates of discoveries, down to 1904.

The Century Cyclopedia of Names includes many geographic names ancient and modern, and treats them briefly.

Lippincott's Gazetteer was first published in 1855, and has been thoroughly made over so that it presents "a picture of the world in its minutest details in the year 1905", and the edition copyright in 1911 has also at the end a summary of the census of 1910. It is in two volumes, edited by the brothers, Angelo and Louis Heilprin. The preface is interesting.

The Automobile Blue Book consists of several volumes, each covering one region of the country, as New England, the Middle West. A volume contains about 900 pages. There are directions at the front, which should be carefully studied, for using. The book contains many advertisements, valuable to those who use it. The maps contain nothing but the information needed by motorists, where to go, how to get there, how long the route is, and very briefly the points of interest what garages and hotels are convenient — these items are concisely told, but the book is not a descriptive travelers' guide.

Stanford's Compendium. There are eight volumes of convenient size, covering all the continents, and the last one being a glossary of geographical and topographical terms. This is an old English publication, revised. It contains a great deal of simply stated and accurate information, a number of easily read folded maps and well selected illustrations. It is a good book for homes and schools.

Baedeker. Baedeker, Murray and Terry are the chief guide books used by sight-seeing travelers. A handbook easily carried in a coat pocket, containing, compactly stated, every sort of information that the traveler can need about the country he passes through, or the town that he stops in, Baedeker may be seen by the dozen in every show place of the world. It contains folded maps, plans of buildings, routes of travel, value of money, prices of transportation, good hotels of various grades, and gives historical, scientific, and descriptive facts of all sorts. A well thumbed set of Baedeker on a shelf represents the full experiences of many a traveler.

The book should be more used than it is by those who do not travel but seek up-to-date information on even unimportant regions of their own or foreign lands. Elementary school teachers should include the volumes among the reference books required for grammar grades.

Order of the Lesson

- (A) Return Exercise XVIII to the class with brief comments.
- (B) Have Exercise XX passed in the class, and answers read and discussed. The teacher, with the necessary books on the desk before her, may act as referee, and more questions may be assigned to a special committee for report at the next lesson.
- (C) With as many copies of as many of the designated books as possible in the hands of pupils, have the questions in Exercise XXI answered by the class, those pupils without books holding this book open at the Summary for reference.
- (D) Assign Exercise XXII for next lesson.

Chapter 12

How to Use Books about Events

Exercise XXIII. For Anyone's Use in Learning the Facts
from Observation

Year Books

Collect as many as possible of the following for the current year :

World Almanac

Statesman's Year Book

New International Year Book

Dictionary of Statistics. Webb

American Year Book

Eagle Almanac

Almanach de Gotha

Annual Register

New York Times Index

The World Almanac. To what are the pink pages at the beginning of the book devoted? What index is included in them? Who publishes the book? What is the quality of the paper and binding? What is the price of the book?

Find in the World Almanac answers to the following questions: At what temperature does alcohol boil? See index. What other subject is treated on the same page? To what are pages 19 to 26 devoted? What is the area of Porto Rico? Under what general subject is it treated? What university or college received the largest donations of money during the past year? What descendants has Andrew Carnegie? When was the British cruiser Hawke sunk? See European War 1915.

How is a coming "cold wave" indicated by whistle signals? When are two heavenly bodies said to be in opposition? What firm published Butterfield's book on fences in 1914? See Almanac for 1915. What is the clause of the Fourteenth Amendment dealing with the public

debt? How many Mohammedans were there in Austria-Hungary last year? How many feet are there in a kilometre? What proportion of the signers of the Declaration of Independence were lawyers? What may be the color of a post card? What injuries to employees are paid for by the employer in New Jersey? Who was the ruler of Luxemburg when the war began? Who is the president of the Canadian Pacific Railroad? Who are the major-generals in the United States army? How much gold was produced in this country in 1912? Notice reference "w" under 1914 in this book. In the Yale-Harvard boat races, what have been the records during the past ten years?

What proportion of the above questions might have been answered by the use of an encyclopedia? What questions could not have been thus answered? What advantages has the World Almanac over any encyclopedia, as a book of reference?

Statesman's Year Book. Who publishes the Statesman's Year Book? For how many years has it been published? What quotation from whom appears on the reverse of its title page? With what nation do the introductory tables chiefly deal? Compare the maps at the end of the introductory tables for 1915 with those of previous year books. Find five bibliographies in the last Year Book.

Examine the table of contents. How many pages of this book are devoted to the British Empire? To the United States? To all other countries? To the German Empire? To France? How many pages are devoted to the index at the end of the book? How many references are given under the word "coal" in this index? Look for the first reference. Is it correct? Find the items by using the table of contents. Find the value of the coal produced in Austria. In what denomination of money is it given? Read the information given on mining in France? Do you know what "conceded" and "non conceded" mines are? In what denomination is the coal output of France given? Is it the same denomination as that used in giving the output of Austria? In what denomination is the output of coal in the United States given? In what denomination is its money value given? What trouble might there be in summing up the world's output of coal? Does the Statesman's Year Book seem better adapted to showing the total condition

of each country, or to studying one topic through all the countries of the world? Look for coal in the *New International Year Book* and in the *World Almanac*.

New International Year Book. Who publishes this year book? Who are its editors? For how many years has it been published? Glance at the preface of an early volume (1910) to see the scope and purpose of the work. Compare the title page with that of the *New International Encyclopedia*.

Dictionary of Statistics. Webb. Use the index to find coal in this book, and compare the fitness of the material given with that of the *World Almanac* and of the *International Year Book*.

The American Year Book. Glance at the preface of this book. What subjects does it emphasize? Look at the table of contents. Is it arranged like the *Statesman's Year Book*? Find coal and look for the world's production for the year. Compare the treatment of the subject with that of the other books in which you looked for the same information.

Eagle Almanac. What maps are included in the map pocket of this almanac for 1915? What subject does the volume emphasize?

Almanach de Gotha. Look at the illustrations in the volume for 1915. If you read French, glance at the preface.

The Annual Register. Look at the 1914 volume. How long has the "new series" run? How many pages are devoted to English History? To the rest of Europe? To America? What subjects chiefly are treated in Part II? Which of the important persons who died in January did you know about? Under what heading is the opening of the Panama Canal treated? See Index. Look through Alice Law's article on the literature of the year for any thing by an American.

New York Times Index. Turn to the references under European War, in Volume I, 1915. Note the sub-divisions into which the subject is divided. Observe that the events of the war are covered in detail and that the conclusions of important editorial discussions and the opinions of men of note are presented in concise form.

Exercise XXIV. For Classes Using this Book

1. When did the present ruler of Greece come to the throne?
2. In the 64th Congress, how many Republican and how many Democratic representatives had Pennsylvania?
3. What is the length in miles of all the canals in Canada?
4. Who is the present ruler of Bhutan?
5. Who wrote an authoritative review of library activities for the year 1914? Where is it published as of reference value?
6. Compare the wages per hour and the hours of labor per week of bricklayers in London, Paris, Rome and New York.
7. Find a photograph of the Crown Prince whose assassination led to the Great War. What was his name?

Summary of Information in this Chapter

Year books are published annually to give "information on many subjects in which the data change from year to year." Usually they contain a variety of information, and some of them are also cyclopedic, giving general information, such as equivalence of the various tables of measure, etc.

World Almanac and Encyclopedia. It is annually published by the Press Publishing Co., which publishes the World newspaper, is one of the fullest, most accurate, and cheapest of such books. Its second title is not a misnomer. It contains almost 900 pages of statistics and reading matter on a variety of subjects, too many to enumerate, from foreign missions to records of races, from the penalty for larceny to the production of lard.

Eagle Almanac. It is published by the Brooklyn Daily Eagle, is similar to the World Almanac, but chiefly devoted to information about New York City and Long Island.

Statesman's Year Book. It is published annually in London, by Macmillan and Co., and edited by J. Scott Keltie. It is devoted to such information about the various nations as may be useful to legislators. The headings under each country are Constitution and government; Area and population; Religion; Instruction; Finance; Defence; Commerce; Money, etc. Each chapter is followed by lists of official and unofficial

books on the subject. The statistics are not reduced to common denominations, and hence comparative study of countries is sometimes difficult.

Almanach de Gotha. This is a German Almanac printed in French dealing chiefly with the calendar, anniversaries and the personnel of the governments, aristocracies and diplomatic corps of all nations.

The New International Year Book. This is published by Dodd, Mead & Co., of New York, and edited by Frank Moore Colby and associates; it is a "compendium of the world's progress" for each year. The subjects treated are: Agriculture, Anthropology, Architecture, Chemistry, Drama, Education, Engineering, Exploration, Feminism, International arbitration, Literature, Medicine, Military progress, Railways, Universities and colleges (not included apparently under Education). Each of these topics is treated by an expert, and the articles contain generalizations as well as statements of definite facts.

The New Dictionary of Statistics, by Augustus D. Webb. It is an English book containing "reliable figures relating to all important subjects which have been numerically described." It is full, systematic, but not up to date, the date of the preface being 1911.

The Annual Register. This is a book devoted chiefly to the year's events in England, and consisting of Part I, a pleasantly told narrative of English and of foreign and colonial history; Part II, a very brief chronicle of the events of the year; a retrospect of literature, science, art, music, drama, etc.; and an obituary of the world's eminent persons deceased during the year. It has a good index.

The American Year Book. This is edited by a number of national learned societies. The men and women who contribute the articles are listed in the front pages. This book is not only a collection of many facts as a "record of progress" in "many departments of human endeavor". It treats the subjects topically, has an analytic table of contents, an elaborate index and a necrology and chronology for the year.

New York Times Index. This Index is issued quarterly by the New York Times newspaper, beginning with 1913. It is arranged under

names of individuals and of events, each item containing a brief description of the event indexed and the date, and is followed by full references to persons and related events. For many purposes the index contains complete information in itself without reference to the matter indexed. For extensive research when the files of the paper need to be consulted, the dates provide a key to the files of any important newspaper if those of the New York Times are not accessible.

Order of the Lesson

- (A) Return Exercise XX to the class with brief comment, and have report of special committee if one was appointed.
- (B) Have Exercise XXII passed and marked by pupils, with discussion when necessary.
- (C) Conduct Exercise XXIII as an oral exercise, the pupils holding this book and as many books listed in this chapter as possible, open before them.
- (D) Assign Exercise XXIV to be done for next lesson.

Chapter 13

How to Use Books about Religion

Collect as many as possible of the following books :

Illustrated Bible Dictionary. Murray. c1908

Comprehensive Concordance. Walker. c1894

Dictionary of the Bible, Hastings. c1898

Cross-reference Bible. c1910

New Schaff-Herzog Encyclopedia of Religious Knowledge. c1908

Catholic Encyclopedia. c1910

Jewish Encyclopedia. c1901

Dictionary of Hymnology. Julian. c1907

History of the Christian Church. Fisher.

History of the Jewish Church. Stanley.

Ten Great Religions. Clarke.

Religious Systems of the World. Edited.

People who are constant students of religious subjects generally have in their homes a concordance, a Bible dictionary, and some book of notes published by their own denomination. There is no subject requiring so much skill in the use of references as the Bible, and few subjects where so little skill is commonly found. Everyone should know how to use the Cross-reference Bible or a concordance, and everyone should know that there are such other reference books as are here listed.

Exercise XXV. For Anyone's Use in Learning the Facts from Observation

Murray's Illustrated Bible Dictionary. How many pages does this book contain? Who publishes this book? How is it bound? How many contributors are there? From what church are they generally drawn? What is said under Baptism on the baptism of infants? Do you find the laying on of hands under Hands or under Laying?

Walker's Concordance. Who published this book? When? How many pages has it? How is it bound? Read the first five paragraphs marked "biographical" on pp. 5-7 and the author's memorandum on p. 6.

Hastings' Dictionary of the Bible. Where was this work published? What was the date of the first edition? See vol. I. How many authors wrote articles in vol. I? Mention several nations and churches which they represent. Are the articles signed? Read any short article, and see how thoroughly you can elucidate its references by the help of the list of abbreviations. Under Baal-Perazim, you are told, "See Driver on 2S5²⁰". Refer to the list of abbreviations for 2S5²⁰. At the top of the same page under Baal-Hermon, occurs, "See Hermon". Look for Hermon in the proper volume of the dictionary. Do you find it? Look in the same way for Driver. Do you find him? Look on p. xiv for his name, and at the end of the extra volume of Hastings for some of his books. Would you have been confused thus if the note had been "See Tennyson"? Evidently persons familiar with the chief authors on the Bible are supposed to use this book.

Cross-reference Bible. Read what interests you of the prefaces. Study, and do the work demanded by the paragraph "How to Use this Bible" on p. viii. Look at the lists of abbreviations on pp. x and xii.

New Scheff-Herzog Encyclopedia of Religious Knowledge. How many volumes are there? Where was the work printed? On what foreign work is it based? Is it a book suitable for both Catholic and Protestant use? What does the appendix contain?

The Catholic Encyclopedia. Where is this work published? How many volumes are there? What does the list of names at the end of the extra volume mean?

Jewish Encyclopedia. How many volumes are there? Who did the work? When was it published? Compare the list of names at the end with that in the Catholic Encyclopedia.

Julian's Dictionary of Hymnology. Who is the editor? What editions have been published? What impressions? Where? Turn to the

Preface to the First Edition. Paragraph 5 : How many manuscripts were examined? Where were they found? Paragraph 7 : How many hymns are there in how many languages? In which languages are they most numerous? Page 1307 : Look for one of the hymns mentioned in the Index of First Lines. Page 1505 : Look for the four references under Abelard. If you wished to find who were the most prolific hymn writers, how could you use this index of authors and editors? Read what interests you under American Hymnody, p. 1525. Find the subject in two other places in the book. Impress on your mind the value of looking thrice before you despair of finding a hymn or its author in this book.

Fisher's History of the Christian Church. Who is the author? When is the preface dated? When was your copy printed? How many maps are there? How are they inserted? Can much be gotten from the subjects of the chapters? In each chapter what aid is there to the making of a summary? What help is there in the running captions at the tops of the pages? What is the most important part of the appendix? Look at the references to Calvin in the index. Are the pages referred to consecutive?

Stanley's History of the Jewish Church. To whom is the book dedicated? In what form was this book originally? When were the three prefaces written? Who is the author? What kind of things are mentioned in the footnotes? What is the value of the indented paragraph topics? What appendices are there? What end notes? What indexes?

Clarke's Ten Great Religions. When was this book copyrighted? Look at the diagram opposite the title page. What claim, and what admission, does the author make in his preface? What is the peculiarity of the table of contents? Why is that kind of table suitable for such a book? Are these analyses included in the chapters themselves? How does the second volume differ in its method of treatment from the first? See preface. Where are books and authors mentioned in the two volumes? What does the appendix contain? Is there a general index or an index to each volume? What are the dates of copyright?

Religious Systems of the World. Who are the authors? Under what circumstances did they make their contributions? Who writes the preface? Is the book well indexed? Is there any other analysis of the matter presented?

Exercise XXVI. For Classes Using this Book.

1. Where are the archives of the Dutch reformed church of America kept?

2. Who was the founder of the "Homines Intelligentie"?

3. What and where was Solomon's porch?

4. Find a good map of the journeyings of the Israelites in the desert.

5. Make, from the Cross-reference Bible, an outline for an essay on Biblical references to the wings of birds.

6. Does the Bible contain a greater number of texts referring to the "blessed" or to the "wicked"?

7. Who was the first woman of New England birth to become a nun?

8. What justification did the Talmudic authorities make for the purchase of slaves at the Fair of Tyre?

9. "Mother of Christ, hear thou thy people's cry." Where and when was this translation published? What other translation is there of this antiphon, not in common use? In what work of Chaucer is the Latin original mentioned? What other hymnologic work did Caswall do?

10. What discussion has there been over the authorship of a hymn beginning, "Father of mercies, condescend"? Follow the discussion to its conclusion.

11. What was the position of women in ancient India?

12. What church claims to be "the purest form of Republicanism"?

13. What is the relation of the Book of Judges to the Book of Joshua?

14. What was the most primitive form of the sacrament of the Lord's Supper?

15. Who wrote "Spiritual Exercises" that moulded the spirits of his followers so that they became the greatest power in the world?

16. When was a Bible society denounced by a papal bull?

17. What historic proof is there that there were Christians in China in the seventh century?

18. What ancient nation anointed and crowned its boundary stones as a religious ceremony?

19. In what sacred book are found verses similar to the Proverbs of Solomon?

20. What did Socrates reply when asked what they should do with him after death?

21. What does Clarke think about the "gift of tongues"?

22. How does the plural form in which the name of God is used in the patriarchal period of the Jewish church seem suitable for the introduction of monotheism?

23. What event in the settlement of Palestine furnished the text for the covenanters at the Battle of Bothwell Bridge?

24. Who was the first king of Judah to die in exile?

25. What poet and painter placed the Sibyls on a level with David and the prophets?

Summary of Information in this Chapter

Murray's Illustrated Bible Dictionary. This is an English book, printed in one thick volume, in 1908. It is called Murray's after its publisher, is edited by Rev. William C. Piercy, Dean of Whitelands College, and has a long list of contributors, mostly clergymen of the Church of England.

Comprehensive Concordance by Rev. J. B. R. Walker. This was published in 1894 by the Congregational Sunday School and Publishing Society. It is "a text-finder only", alphabetic in arrangement, and of a size that can be easily handled.

Dictionary of the Bible, edited by J. Hastings. It consists of 4 volumes and an "Extra volume with indexes". This extra volume contains thirty-seven learned articles on matters of importance, not properly included in a dictionary, six indexes and four maps. A glance at the list of the authors of the articles in any volume will show that a great variety of sources for the information given—Jew and Gentile, English, American and German—were drawn on for the work.

The Cross-reference Bible contains an American edition of the

revised Bible, very elaborately annotated. On p. viii of the preface an exercise is given which teaches the method of using the book. And on p. x there is a list of abbreviations. On p. xvi there is a key showing how to use the variorum readings and another key to the diacritical marks. The book can be used for study only. Its pages so bristle with notes and reference marks that continuous reading is impossible.

New Schaff-Herzog Encyclopedia of Religious Knowledge. This is in 12 volumes, printed in the United States, and is based on a German encyclopedia. It is distinctly a Protestant book. The last volume contains an appendix, so that a topic not found in its proper place may be found here.

The Catholic Encyclopedia. This is published in the United States, but is "an international work of reference on the constitution, doctrine, discipline, and history of the Catholic Church." It consists of 15 volumes and an extra volume containing up-to-date information (1914), an index, some courses of reading in the encyclopedia, and a list of people who "paid in full when subscribing for the encyclopedia."

The Jewish Encyclopedia. This is a "descriptive record of the history, religion, literature, and customs of the Jewish people." It consists of 12 volumes, and was prepared by "more than six hundred scholars and specialists." It was copyrighted in 1901. The last volume contains a long list of patrons.

A Dictionary of Hymnology by John Julian. This is an English book published first in 1891, and now in its second edition, "third impression." The book was ten years in the writing, during which time such books were published in several other languages. Nearly ten thousand manuscripts were examined by the editor, more than a thousand persons were written to, and many books, magazines and pamphlets were read.

There have been written 400,000 hymns in 200 languages, chiefly, 1 German, 2 English, 3 Latin, and 4 Greek. The earliest hymns were Greek; in 170 years there were Syriac hymns; in 200 years more, Latin; in 50 years more, English; in the 9th century, German; in the 13th, Italian.

The preface to the second edition tells the student just how to use the book, and this is very important, for the book has, after the main body of the work, a cross-reference index to first lines, an index to authors, two appendixes, and an elaborate supplement.

History of the Christian Church by G. P. Fisher of Yale, was copyrighted in 1888. It seeks to relate the history of Christianity to the history of civilization, and to give a clear view of the history of theological doctrine. It is intended for intelligent readers, but not for specialists.

There is a table of contents, a full index, an appendix containing a list of General Councils, a list of popes, notes on the literature of the subject, and nine lucid maps. Each paragraph is topicalized also, so that use for reference is easy, and the periods discussed are indicated both by dates and by descriptive captions at the tops of the pages.

History of the Jewish Church by Arthur Penrhyn Stanley, Dean of Westminster. This book consists of three volumes containing three series of lectures given mostly to Dean Stanley's classes at Oxford. It does not, therefore, give a continuous narrative. The lectures are well analyzed in the table of contents, and there are notes in appendixes, but the indexes are meagre. There are topical insets to the paragraphs. The appendix to the third volume contains genealogies and a chronological table.

Ten Great Religions by James Freeman Clarke. It consists of two volumes. The first volume was copyrighted in 1871, and in 1897 there had been thirty-six editions. The author says in the preface that his aim is "to enable the general reader to become acquainted with the doctrines and customs of the principal religions of the world, without having to consult numerous volumes."

Each religion is treated in a chapter. There is at the end an index of authors and an index of subjects.

The second volume was copyrighted in 1883, and in 1889 there had been ten editions. It shows what all the religions teach on the separate points of human belief. In these discussions primitive religions also are treated. The preface contains additions to the list of authors which was given as an index in the first volume. And there is an

appendix containing many interesting notes. There is also a good index.

In both volumes the contents contain analyses of the chapters which are repeated at the chapter headings and are also scattered through the chapters as sectional headings.

Religious Systems of the World.-Edited. This is an English work the first edition of which was printed in 1889, and the tenth edition in 1911. It contains chiefly a collection of addresses given at South Place Institute. "The lectures were first designed to explain and illustrate the different religious movements of the day," then ancient religious systems were added. Some of the lectures have notes, some not. There is an index, but no analyses.

Order of the Lesson

(A) Return to the class Exercise XXII with brief comment and report.

(B) Have Exercise XXIV passed and answers marked by pupils, with any necessary discussion as to the process of finding these answers.

(C) Conduct Exercise XXV orally with open books.

(D) Assign Exercise XXVI to be brought in for next lesson.

Chapter XIV

How to Use Government Publications

Much material may be missed by students who are unaware of the scope of government publications. The United States Document Index, for example, brings readily to light a love-song entitled "My Love has Departed", indexed under *Music, Chippewa Indians*, and found in Bulletin 45 of the Bureau of American Ethnology. Many important or curious or entertaining articles occur in volumes of reports, on the backs of which are such uninforming labels as "Report of the So and So."

In all other chapters we have spoken of publishers only incidentally; for we were concerned almost solely with the books themselves, and their authors. Governments, like those of the United States, of individual states, cities, towns, villages and counties, demand special consideration as publishers. The publications issued by this group of publishers are quite commonly called government documents. Those of our own federal government are usually alluded to, for convenience, as public documents. This same name may be applied to a book or pamphlet issued by a tiny village as its annual report or to a huge report published for the government of Great Britain.

In the arrangement and use of books issued by governments, libraries usually follow a method very different from that which they use in all other cases. They class them, primarily, not according to the individual character of each one, but according to the name of the government that issues them. For example, a report on the geology of New Jersey is first of all listed as a New Jersey document, the entry words on the catalog card being New Jersey Geological Survey. The State of New Jersey is looked upon as the basic or fundamental author, though it is in fact, merely the publisher; the author being, let us assume, John Smith.

Documents are commonly thus treated chiefly for economy and convenience. For economy because each publisher,—national, state or city,—usually issues a closely indexed guide to its own publications;

or, as has been done for the publications of certain states, the work of indexing has been taken up by an individual. These publications form a valuable mass of material constantly being added to, and far too large to permit any scheme of cataloging to make them accessible in a library except by a prohibitive amount of labor, to say nothing of the great space needed to store the cards of such a catalog. The advantages, moreover, of finding in one place all of the most authoritative publications relating to a state or a city are obvious.

One of the most comprehensive indexes of state documents ever prepared is the Index of Economic Material in Documents of the United States, by Adelaide R. Hasse. The documents of 12 states have been covered in as many volumes of the index, and a volume for each of the other states will follow, all to cover the period 1789—1904.

Take up for study certain documents, as follows, so far as they, or others closely akin to them, are available:

National

Thirteenth Census
 Congressional Record
 Commerce Reports
 Report of Commissioner of Education
 Manual of Examinations, United States
 Civil Service Commission
 United States Official Postal Guide
 Farmers' Bulletin No. 42, U. S.
 Department of Agriculture

State

N. J. Legislative Manual	N. J. State Board of Education Report
N. J. Geological Survey	N. J. School Laws

City

Annual Report of Superintendent of Buildings
 of Newark
 Annual Report of Board of Street and
 Water Commissioners of Newark

Free Public Library of Newark Annual
Report

Common Council Manual, Newark

Exercise XXVII For Anyone's Use in Learning the Facts
from Observation

The Thirteenth Census. Vol. I: Under what department of the government is the Bureau of the Census? Where was this volume printed? When? To what date are the facts given supposed to relate? Into what nine groups does the map on p. 16 divide the country?

Where is the center of population in the United States?

From what country do the largest number of our foreign born citizens come?

Vol. II: In what region of the United States was there, between 1900 and 1910, 50% increase in population or over?

Vol. IV: Read, on p. 17, the paragraph beginning "Heretofore." Read, on p. 22, the paragraph on Housekeepers. What percentage of women and what percentage of men over 10 years of age are engaged in gainful occupations in South Carolina?

Vol. V: How big, or how remunerative, must a piece of land be to be called a farm for the purpose of this census? In what parts of the country did farms increase most in value between 1900 and 1910?

Vol. VIII: In the whole country, what percentage of the value of materials used in manufacture was added to them by the manufacturing process?

Vol. X: Why cannot accurate knowledge be had of the value of products of the automobile industry? What are the three great automobile manufacturing states? Compare the number of automobiles run by gasoline, steam, and electricity. Compare the value of bicycles and motorcycles made in 1899, 1904, 1909.

Congressional Record. Read the first page of any number of the Record. Notice the number of the Congress, the volume of the Record, the number of the volume, the date, and the page with which this number begins. What lists are found on the last pages of the record?

I am asked to find the present status of the Keating-Owen Bill.

I do not know what it is about and know only the names of the advocates and the fact that it is a bill. It will not be mentioned in the Congressional Record by its popular name, but by number. Nevertheless, it may be recorded under either Keating or Owen, and if it is the only bill introduced by one of them it can be so found.

It is now May 8. The latest Index to the Congressional Record is dated May 6. There are under Keating five references, but none looks like an important bill. Under Owen there are 15 references, similarly unpromising. In the Index of April 22 under Keating, there are four similar references: under Owen, eight similar. April 8, March 11, February 26, give no help. On February 12 under Keating, comes Keating-Owen Child-labor bill, with a reference, 2058. The Record of that page indicates an early stage of the bill in the first few weeks of the year. Since the date of inquiry for its present status is in early May, 1916, the inquiry must be pursued under another topic.

We will try Child-labor. In the Congressional Record Index, May 6, 1916, under *Child-labor*, there is a reference to a petition favoring the bill. That topic then, will yield good fruit to inquiry. The next previous Index gives "(See H. R.)". In the same Index is a list of House Bills. H. R. 8234 shows that the bill passed the House, was referred to the Senate Committee on Interstate Commerce, was debated and reported with an amendment, the reference being to "(Senate Report 358)", a reference to the Record being 7347. Referring to the Record that contains 7347, we find that Mr. Robinson reported it on April 19, with an amendment. To find anything further about it the newspapers must be searched.

Commerce Reports. Somewhere I have read of an attempt in England to clean roads by the vacuum process. Where can it be found?

A search for the subject through the Public Affairs Information Bulletin, the Readers Guide, the Industrial Arts Index, the books in the Technical Department, and the United States Document Index brings no results. When all else fails, it occurs to us that some United States consul may have reported it, and the matter may have been published in the Commerce Reports. In the Index for April, May

and June, 1915, under *Roads, street-cleaning machinery, England*, the reference is p. 813. Then we find in a report published May 19, 1915, that Consul Hale, of Huddersfield, England, sent to the Department of Commerce two copies of a pamphlet describing a motor vacuum road cleaner which was also referred to in the Commerce Report for April 14, 1915, and that a copy will be lent by the Bureau to any American firm or city wishing to borrow it. On p. 249 is a full account of the machine's work.

Make a list of several interesting articles found in Commerce Reports from the shelves of the library you use.

Report of the Commissioner of Education, 1915. Vol. I: Under what department is the Bureau of Education? When was the Bureau created? How many schools, how many children, and how great expenditure does the report cover? How many volumes are there? Find, in the chapter on educational administration, a paragraph on libraries. Find, in the chapter on education in larger cities, a discussion of the Gary system. Find a discussion of academic freedom, referring to the Scott-Nearing case.

From the Index to Reports of the Commissioner of Education, 1867-1907, find several articles on coeducation, including the first and the last articles on the subject.

Manual of Examinations, United States Civil Service Commission. Read the notice on p. 3. How often is this manual revised? What information does it contain? Notice what you are advised about the index. Does the book contain examination questions?

What civil service material from your own state does your library afford?

United States Official Postal Guide, July, 1915. What notice is there before the title page? When are supplements published? Where can these guides be bought? Is there a post office at Lincoln, Va? At Turner Center, Me? I wish to write to a friend in Oklahoma who lives at a place with a girl's name in a county beginning with L. Between what two places have I a choice? I wish to send an engagement ring to a young lady traveling in Egypt. Can I do it by mail? I took an office on the third floor of a building without an elevator.

and the postman refused to deliver my mail through the slot in the office door. Was he right?

Farmers' Bulletin No. 42. What department publishes it? About what subject does it give information? Find other bulletins on the same subject.

New Jersey Legislative Manual, 1915. Where is the State Home for the Care and Training of Feeble-minded Women? Of how many members is its board of managers composed? Find under the section on Appropriation Law what provision is made for the education of foreign-born residents. What was the previous professional experience of the present Commissioner of Education?

New Jersey Geological Survey. v. 6 of Final Report of State Geologist. Clays and the Clay Industry. 1904. Name the chief clay industries of New Jersey. Find a list of brick manufacturers. Note the complete history of the clay of New Jersey in its relation to the Geological structure of the state.

State Board of Education Report. 1915. What recommendations are made in regard to industrial and vocational education? What are the eight special kinds of schools named in the Report of the Commissioner of Education as having been established in New Jersey?

New Jersey School Laws. 1914. What help in establishing school libraries may public schools receive from the Public Library Commission? For what purposes other than school purposes may schoolhouses be used?

Annual Report of Superintendent of Buildings of Newark. How many garages were built in Newark in 1915? What are the average number of buildings inspected in one month by this department? With what other department is shared the inspection and regulation of theatres, motion pictures, dance halls, etc?

Annual Report of Board of Street and Water Commissioners of Newark. Under how many sections is the report of the Street and Water Commissioners divided? How many flat wheels were removed

from trolley cars in 1914? What was the reason for so large a number? How many gallons of water were consumed in Newark in 1914? From what distributing reservoirs is Newark supplied? What kinds of street paving were in process of construction January 1915?

Free Public Library of Newark Annual Report. What proportion of the total population is registered as using the public library? How many books were lent through the library and its branches in 1914? Describe the resources of the Business Branch.

Common Council Manual, Newark. How many police precincts are there in Newark? Find the population of Newark by wards. How many members are on the Board of Education? How is the Newark Museum Association supported?

Summary of Information in this Chapter

The United States Census. In olden days census reports were taken so that taxes could be laid and armies could be mustered,—and the people hated them. David had the people numbered, and got into trouble by so doing. A plague came upon the land and many died! The Romans enumerated their provinces for tribute. At one time in Rome the citizen who failed to make a full return was sold as a slave. William the Conqueror caused to be compiled a Domesday Book. It was a census.

In modern times, the census is considered a collection of facts which provides data for scientific study of social conditions. From 1686 the Swedish clergy kept a register of births, deaths and marriages, and immigrations, which in 1746 they compiled, publishing the results in 1762. These results formed the material for the earliest insurance statistics. After the Great Plague of London, mortality statistics were taken. In 1791 Sir John Sinclair sent out questions to the clergy of England, and published the results in 21 volumes. This led Parliament to establish an office and take a census every ten years. In 1712 the American colonies of New York and New Jersey desired to take a census, but the movement failed because conservative church members were opposed on the authority of the Bible and the result of David's temerity. When the constitution of the United States made

representation depend on population, a census was made obligatory, and the first was therefore taken in 1790. Each census thereafter improved upon its predecessor in accuracy and fullness, but when, in 1840, industrial facts were asked for, the results were very inaccurate because people claimed that the government had no right to pry into their business affairs. The census of 1850 listed individuals, instead of families. That of 1860 classified females, as well as males, by occupation. Finally, in 1900 a permanent department was established to do the work with systematic continuity.

The Thirteenth Census consists of: 1 Four volumes on population including reports by states, by counties, cities, etc., and occupation statistics. 2 Three volumes on agriculture, including a general report and reports by states. 3 Three volumes on manufactures, including a general report, reports by states and reports for principal industries. 4 One volume on mines and quarries. 5 One volume containing an abstract of all these volumes, quite good enough by itself for the uses of many libraries.

Each volume is a huge tome; the first, for instance, contains 1369 pages.

It is easy to find any desired information in this census as everything is clearly and elaborately headed. There are interesting explanatory paragraphs, logically arranged tables, many charts, diagrams and other graphic devices, and maps showing geographic distributions.

The Congressional Record. This is really a daily newspaper. It contains the whole account of what happens each day in the Senate and in the House. At the end is sometimes printed under the heading "Extension of Remarks" of So and So, what a speaker would have said had he had time. And items such as meeting days of committees, lists of senators and members, of United States judges and officers with their residences, are printed on the last few pages. Fortnightly indexes of this record are put out. The first part of the index is by subject. The second part gives a history of each bill and resolution by its number.

The text of a bill is not given here: it is necessary to write to your own senator or representative to get it.

Commerce Reports. Reports from our consuls in foreign countries and other reports on all kinds of trade conditions, are published daily by the Bureau of Foreign and Domestic Commerce, and are sold by the Superintendent of Public Documents. They give a great variety of information on trade conditions, markets, and any peculiar industrial product or method. Every three months a full index is published.

Report of the Commissioner of Education, 1915. The Bureau of Education at Washington has no authority over the schools of the country, except Indian schools and the schools of Alaska and insular possessions; but it collects and publishes statistics, and makes annually a survey consisting of articles, each by someone specially fitted to deal with the topic he treats, covering the year's progress in education. Besides its annual volume of statistics and its annual survey, it puts out a number of special studies, about 50 a year, which it distributes to schools. There is an index to these reports, covering 40 years, making available valuable information on all aspects of education.

Civil Service Manual. The civil service commissions of the United States, of the several states and of the larger cities publish all needed information on their subjects and methods. There are also a number of books and manuals privately published for the same purpose.

One of the most interesting books on this subject is a report of the Sixth Meeting of the National Assembly of Civil Service Commissioners, held in New York City, June, 1913. It is published by the Citizen's Committee, appointed by His Honor the Mayor of the City of New York to arrange for the social entertainment of the delegates.

United States Official Postal Guide. This is a guide published annually from figures furnished by the Post Office Department, by J. B. Lyon, printer, of Albany. Monthly supplements are published also. It contains the classification of mail matter, with rules and rates, an account of the postal savings system, of the postal money order system, registered mail, insurance, postal rates on foreign mail, articles prohibited in the mail, regulations of the parcel post, elaborate lists of post offices, one alphabetic list of all post offices, one list classified by states and one by counties.

Farmers' Bulletins. The Department of Agriculture is one of the greatest educational institutions of the country. Its bulletins include scientifically accurate articles on gardening, poultry, farm work, cooking and agriculture from every angle. No farmer should be without full information as to what he can get from the government to help him and his wife to do their work efficiently.

New Jersey Legislative Manual. This is a very useful handbook of the state. It includes a short history of New Jersey, the state constitution, short histories of state institutions, a county directory, biographies of state officers, terms of office and salaries of state officials.

New Jersey Geological Survey. Reports are issued annually. While largely technical, they contain maps and special articles of great use to anyone wishing to have a knowledge of the natural resources of New Jersey. They are distributed free by the New Jersey Geological Survey to any library or institution sending for them and remitting postage.

State Board of Education Report. Reports are issued annually. They contain a history of the educational work done throughout the state for the year, statistics of all kinds relating to school work, reports from all city and county school superintendents, report of the teachers' retirement fund, report on manual and industrial training in New Jersey, etc.

New Jersey School Laws. This is a compilation of the school laws affecting teachers, and is a necessary hand-book for all teachers. It is prepared by the Superintendent of Public Instruction.

Reports of City Officers. City boards, commissions, institutions and officers submit annual reports to the governing board of the city. These reports are the most authoritative source of local history, statistics and city policy. They are an invaluable and often unsuspected source of all manner of useful and entertaining information.

Common Council Manual, City Roster, City Manual, the manual of the governing board of a city, is generally issued annually and contains statistics and exact information, historical and up-to-date, of the organization of city departments and their officers.

Chapter 15

How to Investigate a Subject

To investigate a subject successfully three things are needed: 1 A determination to get information. 2 A general knowledge of what resources for reference libraries have. 3 Ingenuity.

Instead of setting problems which may be impossible of accomplishment for lack of resources, this chapter offers a few stories of researches made in a fair-sized city library by people of no especial experience or training.

Story of a search to identify Grover Cleveland as a connection of John Cleveland, the English poet.

In the Genealogy of Benjamin Cleveland, which is a record of Moses Cleveland of Woburn, Mass., there is a special section entitled "The Cleivlands of Leicestershire, England". On p. 4 of this section is recorded "John the poet, son of Thomas Cleivland". This at once places John Cleveland in the same line with Moses Cleveland. The Index, however, gives no reference to Grover Cleveland.

The Century Cyclopedia of Names gives no clue to his ancestry.

From King's Life of Grover Cleveland we learn that the name chosen by his parents was Stephen Grover, but he was never known as Stephen. Looking in the Index of the Moses Cleveland Genealogy under Stephen we find a reference to a Stephen who belonged to a branch of a Cleveland family, of which no genealogical record has been kept. This branch was called the Aaron branch because it is the descendants of Aaron who have not been recorded. Moreover, this inquiry led up a blind alley, because we find on reading further in the book by King that Stephen was not a family name, but was given him in honor of the pastor who had preceded his father in the Caldwell Church. We find in King, however, a reference to a Dr. Aaron Cleveland, the grandfather of Grover Cleveland's grandfather, an Episcopal minister of Philadelphia and a friend of Benjamin Franklin.

In Whittle's "Grover Cleveland" we find that the death of Aaron was recorded by Benjamin Franklin in the Pennsylvania Gazette of 1757. This at once settles the question, for, although there is a misleading statement about his parish in New Castle, Pa., instead of Philadelphia as is noted in each of the other books consulted, the story is told of his trip to the home of his old friend Dr. Franklin of Philadelphia, where he was taken sick and died in August 1757, a notice of which, written by Dr. Franklin, appeared in the Pennsylvania Gazette.

Story of a search for the death of Madame Henriette Ronner,
the great painter of cats.

We looked in Who's Who for 1915, 1914, 1913, 1912, and found no mention of Madame Ronner; but in Who's Who, 1911, her name was given. What should you judge as to the possible dates of her death? She is not mentioned in:

Century Cyclopedia of names

International Year Books, 1912, 1911, 1910.

Dictionary of Universal Biography, Hyamson. c 1915

We looked in the card catalog, and found a book written about her in 1892. Why would that be valueless? Under *cats* and *animals* there was no mention of her.

The Readers' Guide for 1915, 1914, 1913, 1912, 1911 had no reference to her.

The necrology of the World Almanac for 1911-1912 did not contain her name. Neither did the necrology of the Literary Year Book.

In the picture collection we found a copy of one of her daughter Alice's paintings, with notes on the same page mentioning her as the "daughter of Madame Ronner who died recently." The excerpt had been cut from a pamphlet, and had at the top of the page the caption Studio Talk, and at the bottom the page number 159. This led to the International Studio, bound volumes of which were consulted for 1912 and 1911. The page was found for December, 1911.

We thought ourselves sure then, that Madame Ronner died before December, 1911, but in that year. We looked in bound volumes of

L'Art et les Artistes, a French art magazine in which occurred necrologies, but she was not mentioned in 1911. We tried the Times Index—London Times—for that year, fruitlessly. The Almanac Hachette, a French almanac, has necrologies a year or more later than the deaths of the people mentioned. She was not there.

Then we wrote to the art department of a large library and they tried many sources that our library did not furnish, among them old files of the New York Evening Post. From that paper they found that she died before March 13, 1909.

Now if that was true we had been led astray twice. In the first place, *Who's Who* had carried Madame Ronner's name two years after her death. In the second place, the International Studio had used the word "recently" two years and nine months after the death of a person. That would not be singular about an important event in the life of a nation; the Spanish War indeed is recent. But in connection with an individual the word misled us.

We went back to the World Almanac, the Readers' Guide, etc., but found nothing. Our volumes of *L'Art et les Artistes* began in 1911; the Almanac Hachette's necrologies began in 1911. Studio Talk of 1909 made no mention of our artist. The Times Index gave us nothing.

There stand on a shelf in the art department 14 yearly volumes, from 1903 to 1916 inclusive, each called *The Year's Art*. This is an English annual publication, but deals with the art of the world. And in the 1910 volume, indexed under "Obituary", there is a list of the artists who died in 1909. It reports:

"Ronner, Henriette, animal painter, died March 3d, aged 88."

Thus ended a search, annoying and laborious far beyond the value of the information finally obtained, which would not have been so had we not made two mistakes: we placed a too implicit confidence in the infallibility of *Who's Who*, and we neglected a compact collection of facts on a special subject which lay at our elbow.

Story of a search for a prose oration on Webster's attitude in regard to the extension of slavery that paralleled Whittier's Ichabod

1. We read Ichabod over to get its sentiments.

2. We looked up Webster in the card catalog, and found on one of the cards his dates, 1782—1852.

3. We looked for thirteen lives of Webster, found ten of them, and glanced through their contents and indexes.

4. In Fisher's Life of Webster, called the True Daniel Webster, were two references to an arraignment of him in a sermon preached after his death by Theodore Parker.

5. We looked up Parker in the card catalog.

6. We looked for four lives of Parker, and found one.

7. In J. W. Chadwick's Life of Parker, called Theodore Parker, Preacher and Reformer, we found in the index, under Webster, a number of references, one of which read: "Webster dies; Parker preaches sermon on." The reference told that the sermon was preached on October 31, 1852, but that it was printed, in longer than the spoken form, on March 7, 1853.

8. In Poole's Index, vol. 1, Part 2, a number of references were found both to Parker and to Webster, and all that looked in the least promising were followed up, as far as the bound volumes contained in the library permitted, with no result.

9. There is a stack in the library containing bound magazines and newspapers not used sufficiently to warrant giving them space in the periodical room. The contents for 1852, 1853, 1854 of several of the magazines, not included in Poole, were examined to no avail.

10. The Liberator, a newspaper published in Boston, William Lloyd Garrison, editor, for 1852—1853 was examined. Its first issue after Oct. 31, 1852 was that of Nov. 5. And here was found the sermon, phonographically reported by Rufus Leighton and J. M. W. Yerrinton, which so well paralleled the sentiments of Ichabod that the search ceased.

Exercise XXVII For Any Student's Use

Look through previous chapters and answer in writing the following questions:

Where may the life of a person be found? Of a noted person of the past? Where should one look for a place mentioned in history?

For a place mentioned in the newspapers? For a new theory in science? For a religious doctrine? For an industrial process? For the origin of a social custom? For the derivation of a current phrase? For parallels and a justification of a social reform?

Exercise XXVIII For Classes Using this Book

- 1 Where is Bagnio?
- 2 What is the origin of the term Bucket Shop?
- 3 Whence arose the story of the Leak in the Dike?
- 4 What is the family name of George V?
- 5 For the ten largest cities of your state find :
 - a. Population over ten years of age
 - b. Number of illiterates 10 years old or over
 - c. Number of school children
 - d. Is there a library?
 - e. Its circulation per literate population 10 years old or over.
- 6 What mutiny occurred among United States troops during the Mexican War?
- 7 In what is a child called "Mighty lak' a rose"?
- 8 Find an article by Schaeffer against military education.
- 9 Find a catalog giving the date for the history of the Monroe Doctrine.
- 10 Find an article on morons.
- 11 What is "Mother of Men"?
- 12 How tall was Napoleon?
- 13 What was Herbert Spencer's Philosophy of style?
- 14 Are young men more successful to-day than in the past?
- 15 What is a peculiar Hawaiian musical instrument, and what is it called?
- 16 How did the U. S. come to be called "Uncle Sam"?
- 17 Where was Villa born?
- 18 What are the biggest salaries received by women?
- 19 How do the Japanese dwarf their trees?

Additional Suggestions

The ingenious investigator finds information in strange places. If you

fail to find what you seek in an article on India, try tigers, Buddhists, caste, Brahmins, and other related topics.

An interesting paragraph may be made on an American town of 500 inhabitants by using atlas, gazetteer, "Bradstreet" (which libraries do not have; but which large business houses have, and use to find the financial standing of other firms), a postal guide, a railroad guide, the lawyer's directory, a fire directory and a newspaper directory: It is a town of 500 people, on the edge of the Piedmont Region at the junction of such a creek and such a river. It has a grist mill, two churches, and a good fire department. Its houses are largely of wood. It is the financial center of a prosperous farming country and contains two stores which supply general merchandise and agricultural implements to the neighboring farmers. The * * * Weekly is published here.

If the subject is historic, use first one or more histories, then an encyclopedia, noting its book lists, then the card catalog, and supplement with such other reference books as the library has.

If the subject is commercial, or industrial, or scientific, use the encyclopedia for the history of it, watching the dates. Then use the card catalog, noticing dates of publication, then the Reader's Guide for popular treatments, beginning with the latest, and the Industrial Arts Index of technical magazines, finishing with a thorough search among government publications, or publications of the state in which the article grows or is made.

If the subject is social, and current, begin with the Readers' Guide, then use the card catalog, remembering that the date of writing and the predilections of the author are vital matters, and finish with government publications. If you do not know the author, look him up.

The tendency of the human mind to be diverted from a main object to side issues is the great stumbling block in an attempt to gather printed information on a subject. The prime essentials to learning about something are: first, to have a clear idea of the subject; second, a clear idea of what you wish to know about that subject; and third, to take from the material found on the subject only the information that is clearly applicable to it.

It is difficult for persons with untrained minds to do this, because

untrained minds are often vague minds. A geologist can find out in an hour on some new point in geology more than a layman can find in a week. But a well trained geologist or lawyer or theologian can find about art, or ethnology in an hour more than a layman untrained in any subject can find in a day. Thus, before you can have a clear idea of a subject you must pass through a period of having vague ideas. The process of clarifying your mind as to what you want to know is not reference work. But it is a necessary preliminary to reference work, and the omission of this preliminary may cause an amateur user of libraries to feel that his resources are inadequate, when, rather, his demands are indefinite. On most subjects it is safe to read a good deal, beginning with the encyclopedia, until a clear notion of what you want to dig for emerges. Then only can you begin excavations with any hope of success.

"I want to know about Carlyle", says the library patron.

"Do you want his life?" asks the librarian.

"N-no", says the client, "I want to know about his work, you know, and his views and all."

When this student has read about Carlyle in two encyclopedias and a couple of magazine articles, and has dipped into several volumes of his essays, she emerges with "I want to find out how Carlyle has contributed to this idea that might makes right and that efficiency in doing a thing justifies the thing done."

Now is she ready to begin her search. And if she puts that sentence at the head of every page of notes, she may in the end write an essay that is a real contribution to knowledge of her club, because it is a distinct contribution.

It is only after this preparation that a subject can be successfully investigated. It forms the foundation of all so-called research work, whether it be for the purpose of taking out information from matter already compiled, or for gathering information with which to construct compilation.

Modern American Library Economy As Illustrated by the Newark N. J. Free Public Library

By John Cotton Dana

Volume II

Part XIX

Aids in High School Teaching; Pictures and Objects

By J. C. Dana and Blanche Gardner

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Note of Explanation

Since we have named this pamphlet *Aids in High School Teaching*, the presence of the book list and the list of sources of material for visual instruction requires explanation.

The Lending Department compiled a very valuable list of books, pamphlets and magazine articles on the subject of the use of illustration in teaching—either in the grades, or high schools or in higher institutions. This we include for its general interest, though it is somewhat outside the limits of our subject.

The list of sources of objects for visual instruction hardly belongs to this book; but the things in this field suited to high school work are few in number and it seemed desirable to make a list of them and their sources, and to include also the material of which, as this list shows, there is a large quantity adapted to visual instruction in the grades.

Aids in High School Teaching: Pictures and Objects

As a basis for the preparation of this pamphlet a questionnaire, Fig. 1, with a letter, Fig. 2, was mailed to 192 teachers in the four Newark high schools and the Newark Academy, to 12 Newark State Normal School teachers, and, with a second letter, Fig. 3, to 35 persons or institutions outside of Newark known by their activities in this field. About 100 replies were received.

In addition to numerous suggestions for pictures and for sources of pictures, comments of such interest were made that we give here a brief summary.

Replies were received from 88 teachers of the following high school subjects: English, Greek, Civics, Economics, School Hygiene, Chemistry, Drawing, Mathematics, Physics, Science, Biology, Social Science, French, Modern Languages, German, History, Art, Physical Training, Shop, Latin. Seven of these had not used the Newark Library. 16 had used other libraries. Only 12 had used museum collections. 60 either had collected pictures of their own or used collections belonging to their schools.

It is natural, since only 12 were familiar with specimens and objects available from museums, that most of the replies said that, of illustrative material, pictures were the most useful, and the variety of pictures indicated was wide: pictures illustrating periods of history, literature, art; narrative pictures; pictures of an imaginative nature to interpret incidents and events; pictures for development of art appreciation; of styles of architecture, costumes, furniture and military equipment; of men and women in various poses and of athletes for drawing and art work; pictures illustrating Greek and Roman life, dress, camps, etc.; geography pictures; portraits; and a general demand for pictures in color.

Two teachers mentioned the value of the Newark collection of German commercial art; four used picture postcards freely; five used maps; three used illustrated art books.

Suggestions for making library and museum material more accessible and for increasing and extending the supply of material were very full. Seventeen asked to have the collection advertised by special exhibits to travel automatically among the schools, so bringing pictures to the attention of teachers or making pictures accessible with the least effort on the part of the teacher; and by framed pictures for decoration of school walls. Eight asked for sets of pictures specially selected for special purposes, to be assembled and filed as a unit to be lent when called for, this to obviate the necessity of making a new selection each time a subject is studied.

One teacher asked for an arrangement by which all the pictures borrowed by individual teachers might be available for other teachers in the school when not in use. Five felt the need for more duplication of pictures much used, and of sets of pictures as mentioned above. 25 teachers urged the compilation of such a classified list of pictures as is begun here. Two brought up the question of how to keep the pictures clean. One asked for a smaller collection selected for scientific rather than artistic value. One needed to keep pictures longer than one month,—another wished to shorten the time limit in order that pictures needed by several teachers might be sooner available to all. Six suggested that the library get from teachers suggestions of pictures needed in their departments. One wished an exhibit at the library each September of new material added during the year. One asked that material in the Newark library be made accessible throughout the state. Four wished a very elastic system of delivery to avoid delay in securing pictures. One asked for pictures and charts to illustrate lectures in Latin courses. Eight asked for charts, diagrams and illustrations of economic, industrial and civic problems.

The suggestion was made that the interest of high school pupils be directed to collect pictures from magazines, and to raise money

by entertainments, etc., to make additions to the picture collection. One teacher of shop work asked for charts showing machinery, locomotives, bridges, etc.

Suggestions for museum material were as follows: dolls in costume; phonograph records; Roman coins and models of antiquities and other historic material,—old letters, etc.; pottery, fabrics and wall papers; ores and metals. Five asked for lantern slides; three for stuffed birds; two for specimens of woods, showing grains, etc.; one for photographs and lantern slides accompanied by written lectures to lend to schools.

Two asked for objects of art to be lent for decorative purposes; five wished small pictures for the reflectoscope; seven asked for industrial and other exhibits of local interest. Other suggestions were that children who visit the museum be instructed in making models, diagrams, maps, costumes, etc., to give to the museum; that docents connected with the museum instruct classes; that outlines of material be prepared to correlate with school work.

These comments indicate plainly the well-recognized need for material which libraries and museums are providing more and more freely for use of teachers in class rooms. The difficulty of advertising this material adequately is made plain by the fact that many of the suggestions made for extending the collections of such material in Newark are already in force, and these suggestions have been made by teachers who are comparatively familiar through their use of the library with the collections at their disposal. It is one of the most important activities of those administering such collections to make known their resources to the right persons at the right time.

The Growth of Illustrative Collections

This demand by teachers for illustrative material has been increasingly felt during my twenty-seven years of library experience, and the efforts to meet it have developed the present picture collection in the Newark Library, its map collections, and the lending specimens of the Newark Museum Association.

These collections have grown unevenly. They have been used largely by grade teachers and by High School teachers of English, history and science, and so are more complete in these branches. Pictures and objects for exhibits have been bought when they were issued even if not relating to subjects most in demand, and again material has been sought out for subjects most asked for; but we have not yet systematically examined our collections to make them complete.

Scope of this Pamphlet

This pamphlet, which is a compilation of subjects on specific pictures and objects, and their sources, was prepared at the request of Miss Mary E. Hall, Librarian of the Girls' High School, Brooklyn, New York; of Miss Margaret Coult, Head of English Department, Barringer High School, Newark, and of many other teachers and librarians who have been working on the subject.

Our original plan was to cover all subjects both for high school and grade work. We have found it necessary to limit it to high school work, leaving material for grades for a revision, and to limit subjects to English literature, Greek, Roman and English history, and Latin. Other high school subjects not touched on here, and to be included in a revision, are agriculture; art; botany; civics; commercial geography; domestic science; drawing; French; German; Greek; American and European history; music; physiography; science; shop work and zoology.

Small pictures, of which there are thousands in magazines and elsewhere, are not listed freely because of their number, except those which are of special importance.

Modern German Art

I would emphasize particularly the importance of German lithographs,—decorative pictures, recent posters brought out during the present war, German commercial poster art, and illustrations in German printing magazines and monographs. Some of this material is listed here, but its use by schools is treated at length in two

pamphlets of the Modern American Library Economy Series,—Decorative and Educational Pictures, and The Picture Collection. These pamphlets discuss also, methods of mounting, storing and lending pictures.

Maps

The correlation of maps with high school subjects also, is not attempted here. Maps are, of course, one of the most important divisions of illustrative material. For geography and history the sources are so many that selection of maps is not easily made. The development of courses of commercial geography has called into wider use transportation maps showing land and water routes, coast pilot charts, soil and relief, climate, rainfall, and topographic maps issued by the U. S. Coast and Geodetic Survey and the U. S. Geological Survey. The distribution of products, the relative amounts of materials produced, consumed, exported and imported are clearly shown in specially prepared maps. For the study of a city in its schools, maps of the city are needed to indicate political lines of wards, fire and police precincts, kinds of paving, water, light, and shade tree provisions. Such maps may usually be secured from the city clerk. Street maps of other cities also must be used for comparison of plans, trolley systems, etc.

For botany, zoology, geology and astronomy there are forestry, flora and fauna maps, topographic, hydrographic and soil maps and charts supplied by the governments of all countries.

Language and literature courses are supplemented by physical and political maps and race and language charts indicating the races inhabiting various types of regions and the dependence of language on history and geography. Sources for all of these maps are given in a pamphlet of this series,—Maps, Atlases and Geographical Publications.

Printed Broadside

We have also found useful in schools broadsides printed in type large enough to be seen across a school room, on cards 13"x 17½", and 17½"x26". Some of the subjects of these broadsides are:

"What the Good Citizen Says"; "The Coming of Spring," Wordsworth; "Books: Our teachers and our good masters," Richard De Bury; "Education and Intellect," Newman; "The Celestial Surgeon," Stevenson; "A Word to the Hesitating Purchaser," Stevenson; "The Happy Warrior," Wordsworth, and miscellaneous quotations from Shakespeare.

The Free Public Library of Newark, New Jersey

John Cotton Dana, Librarian

Please fill out and mail in the enclosed envelope:
Have you used material from the Newark Library?
 What did you find most useful?
Have you used material from other libraries?
 What was most useful?
Have you used material from the Newark Museums?
 What was most useful?
Have you used material from other libraries and museums?
 What was most useful?
How can libraries and museums make pictures and other material more easily accessible and more useful?
Do you have a collection of your own in your school?
 What does it include?
 How have you brought it together?
 What would you like from the library or museum to supplement it?
Please make suggestions about increasing and extending the supply of material in the Newark Library or Museum or in other like institutions with which you are familiar?

Fig. 1

For valuable suggestions from practical experience we are indebted especially to Miss Margaret Coult, Miss Mary E. Hall, Miss Lillian Russell, Librarian, New Haven High School, the

Technical Education Bulletin, No. 20 of Teachers College Bulletin, and to the responses we received from teachers, librarians and museum workers whom we asked for assistance.

We would again explain that as work on this pamphlet progressed, it seemed imperative to limit it to the three subjects included, and to limit the sources of illustrative material for these three subjects, in the main, to such sets of pictures and objects as we were able to find had been of practical use to teachers in Newark schools.

If the material here presented meets a need, we shall amplify these same subjects, and continue along like lines for other high school subjects and, possibly, for the grades.

J. C. Dana.

1916

The Free Public Library of Newark, New Jersey

John Cotton Dana, Librarian

May 2, 1916.

Dear

We are preparing a pamphlet on pictures of all kinds and other material, useful to High School teachers in work with their classes.

You have had experience in using illustrative material, some from this library, some perhaps from other libraries, and some from museums.

Will you kindly answer the enclosed questions, and make such suggestions as your experience suggests?

We hope to use the results of these inquiries to make the pamphlet of greater value to High School teachers. It will be printed and ready for distribution at the 1916 meeting of the N. E. A. and will be used especially for the High School Library Exhibit at the Washington Irving High School, July 3 to 10.

Yours truly,

The Free Public Library of Newark, New Jersey

John Cotton Dana, Librarian

May 3, 1916.

Dear

We are sending the enclosed letter to High School teachers in Newark. We shall be glad to have any suggestions you may be able to make on the subject.

Yours truly,

Fig. 3

The Use of Pictures in High School English

By Margaret Coult

Head of English Department, Barringer High School
Newark, N. J.

The use of pictures in school literary work is unquestionably helpful; but most schools have not at hand a sufficient stock to make it satisfactory. The Barringer High School of Newark, New Jersey, has been fortunate in having at its command the very wide resources of The Picture Department of the Newark Public Library. I have been asked to give a statement of the manner in which I have used, in my English work, the pictures I have there obtained.

First, then, is the very obvious use of presenting to classes pictures of authors whose works are studied, and of places associated with them. The personal interest in a writer aroused by such pictures is of great help in understanding and appreciating his work. Some pieces of literature are best approached through this interest in the author. A pupil made acquainted with Sir Walter Scott and the places in Scotland connected with him, with the romantic story of Stevenson's life and with his attractive personality, is prepared for a receptive study of "The Lady of the Lake" or of

"Travels with a Donkey." We all have a clearer thought of a person whose face we know. To put before a class portraits of authors they are studying helps greatly, in my experience, to enliven the study of what those authors have written. The pictures that can be used in this way, if one has a large collection to draw from, are much greater in number than any text-book can supply. Many of our text-books are, it is true, pleasantly illustrated; but their illustrations are, without question, quite insufficient for satisfactory use with a class.

Closely akin to this use of pictures to impress upon pupils the personality and the life history of an author is their use to build out a period, to furnish accessories and details for understanding of a piece of literature or of a period of literature. In studying Macaulay's "Life of Johnson," for instance, it is surely desirable that the pupil realize clearly the period in which Johnson flourished,—that he know the great men grouped about Johnson in his club, that he form mental pictures of the society gathered in the parlors of Mrs. Thrale. To that end, I put before my classes a series of pictures on the life and times of Johnson. Fortunately, this period is easily illustrated. Our list includes pictures of members of Johnson's famous club, a group gathered about the table of Sir Joshua Reynolds; a picture of the first meeting of Johnson and Goldsmith in a cosy little inn parlor; Johnson waiting in the ante-room of Lord Chesterfield, crowded upon by the fashionables of the time and stared at derisively by the beaux and belles passing to their audience with the famous nobleman; and a collection of copies of portraits by Sir Joshua Reynolds. These last certainly give, in lively presentation, the people of the times. We have many colored prints of famous pictures by Reynolds. To these we have added a set selected from Abbey's illustrations for Goldsmith's "Deserted Village." This Johnson collection, set about an ordinary school room, makes doubly interesting to the pupils the literature they are studying.

The pictures are easily put up. Many of them are large enough to be seen plainly across the school room. Stretch an ordinary

picture wire along the top of the blackboard, fasten a little Dennison hanger to the mounting-card, and thus arrange a line of pictures to be exhibited. Large illustrations thus displayed are far better than small pictures which must be passed from hand to hand. The latter method of necessity scatters the attention of the class, while the larger pictures can be discussed by the teacher and the class as a whole. The teacher and the class can look at them and talk about them before school, at noon time, and after school, as the class is gathering for recitation, or as it leaves the room.

What I have said in regard to illustrating Macaulay's "Johnson," I could say in regard to many other pieces of literature. This pamphlet gives lists of pictures illustrating many different subjects in the high school English courses. We have an admirable list of Milton subjects: some that help to visualize lines of his poems; some that show the characteristics of that English landscape out of which came so large a part of *L'Allegro* and *Il Penseroso*; others that give an impression of the college buildings at Oxford and Cambridge, the architecture that was in Milton's mind when he wrote of "storied windows, richly dight," and of "antique pillars, massy proof." Occasionally we find excellent direct illustration attached to the poem itself, such as Maxfield Parrish's beautiful paintings in the *Century Magazine*, vol. 41, page 163; but most of the pictures we use are gathered from varied sources and were not originally intended as illustrations for Milton's poems.

Another phase of the use of pictures in English work is as an instigation to description and narration, particularly the former. Many of the pupils in our high schools have seen nature very imperfectly. Some that are keen-minded when dealing with people and the conduct of life, are blind and dumb when called upon to write or talk about the out-of-door world. I remember particularly one bright little boy, who, when asked to write a description of something that he had seen and enjoyed in nature, said, "I cannot do that at all; I don't know anything about it. I have never looked at things out-of-doors." I asked, "Can't you think of some place that you really like?" After a moment's thought, he said, "Yes,

I do remember a certain grove near a little town in which I was staying one summer, but," he added, "the reason, I liked that grove was that I could go there and read." The lad had really never seen the place in which he was reading. Now, for such pupils the discussion of pictures by the teacher with the class will do much. It is not often possible for us to take our pupils out-of-doors to look at a scene and discuss its artistic values; but it is very easy for a teacher to put up before the class a good picture, which all of the class can see, and discuss that picture with the class, finding out what are its artistic features, deciding upon a method of attack in description, selecting the details to be described, and agreeing upon the order in which the details are to be mentioned. Such work is decidedly helpful, helpful not only in studying description, but in the more important matter of arousing appreciation.

I have long thought that one of the reasons for literary blindness on the part of our pupils is that they are artistically blind, not only to literature, but to form, grouping, color; to all of those sources of artistic effect that can be so directly presented in a picture. I believe that a discussion of pictures by the teacher with the class is perhaps the best, and easiest, method of arousing artistic perception; and hence is a direct and simple method of developing literary skill.

There is another use to which I have sometimes put pictures. Suppose that I have been studying with a class the development of the sense of beauty at the time of the Renaissance. How clearly that subject may be presented by putting before the class a series of photographs of typical pictures of Italian painters from Cimabue to Raphael and Leonardo da Vinci,—Cimabue, Giotto, Fra Angelico, Botticelli, Perugino, Leonardo da Vinci, Raphael. In this succession of pictures can be seen at a glance the growth in grace of line, in skill in grouping,—in a word, in beauty.

Suppose, now, that we wish to illustrate another idea, to show the difference between the classic treatment and the romantic treatment in art. Let us select for the classic spirit such a spirit as

Hobbema's well-known landscape, showing, through the middle of the picture, a parallel row of slender trees. Let us take, for the contrary spirit, such a work of art as Boecklin's "Holy Grove." The two pictures, displayed before the class, very definitely present two methods in art. In the Hobbema landscape all is clear, distinct, sun-flooded, fully and clearly expressed. In the picture of Boecklin, the more essential ideas in the composition are those that the mind must supply for itself. There are the long receding avenue of trees; the procession of veiled worshippers advancing to bow before the shrine, with its upward pointing flame; the gleaming column of a temple, evidently the home of these mysterious worshippers; the temple itself hidden behind masses of trees, only a gleam of marble to suggest to the mind what is there; the whole is full of suggestion, of hints, of stimulus to thought. I believe a class can easily be made to see the essential characteristics of the romantic method of art through such a picture as this, and that the conception can thus be fastened upon the mind with particular definiteness. Let us now change our subject, and take, instead of landscapes, pictures of two pieces of statuary. For the classic method, let us take the Seated Hermes; for the romantic method, a statue by Rodin, in which the figure seems detaching itself from the mass of marble, out of which it has been born. Here, again, we have the classic method and the romantic method. Here, again, we have such a presentation of the two methods as must have an effect upon the mind of almost every student.

There are many other ways in which pictures may be made helpful in English work. I sometimes hang about the room examples of the work, say, of Maxfield Parrish, asking the members of the class to choose each a picture; then, after the pictures have been in the room about a week, the pupil brings his choice before the class and comments upon it, pointing out its value as he has discovered it for himself. In work like this, it is well for the teacher to discuss two or three pictures first, as a guide to the pupils. Such work could be developed almost endlessly. I have spoken of the pictures of Maxfield Parrish because they show

imaginative treatment of a subject, and present fine studies in the use of color. Pictures by Turner are also good for this purpose.

It is obvious that, while a pupil is gaining by exercises like these some ideas of composition and artistic effect, he is also acquiring knowledge of artists and of their work, knowledge by no means useless.

I occasionally have upon my hands classes particularly stupid, dull, devoid of ideas. To stimulate them, I find it helpful to put up about the room a rather miscellaneous collection of pictures, large enough for the whole class to see; then set to work, teacher and pupil together, writing brief themes suggested by the pictures, reading them in class and discussing them, with the pictures before us to help the discussion.

I sometimes vary my method thus: I put up about the room pictures of people, small pictures that can be easily put in a book and carried home. I ask each pupil to select one, take it home, and write a character study suggested by it. The character study need not slavishly follow the picture; the picture simply serves as stimulus and suggestion. When the themes are read in class, the pictures are again hung up, that we may, in judging the work of the pupil, see what has suggested it.

I have probably been influenced in my use of pictures by the stimulus that I have myself gained from them. I remember well that my first notions of Shakespeare came from a big illustrated volume of his plays, the leaves of which I used to turn, studying the pictures and reading the quotations under them. Those quotations I can recite today. I remember, too, the delight that it was to me later, in reading the plays, to fit the quotations into their places and to learn what the pictures really meant. I remember, too, the effect upon my childish imagination of Doré's picture of Elaine in her barge. That picture was the frontispiece of a volume of Tennyson through which I made my acquaintance of the poet. Underneath the picture were the lines:

2 American Architect, 50 Union Square, N. Y. Sets of 15 to 100 plates from back numbers. Price, 60c to \$4 a set. Classified list of subjects issued.

3 Arnold, E. J. & Son, Butterfly St., Hunslet Lane, Leeds, England. Their "A. L." list is an illustrated and indexed catalog of school supplies. Lithographs on English history are recommended. Some lithographs listed are published in Germany (see Schulwart); for example, Hartinger's series of trees, published at 38c each, are listed in Arnold at 62c, etc.

4 Art in advertising. Pub. by H. C. Perleberg Co., 376 Central Ave., Jersey City, N. J. 50 photographic plates. $7\frac{3}{4}" \times 9\frac{3}{4}"$. Several subjects for advertising and poster work on each plate. Price, \$9.90. May be ordered direct from publisher.

5 Art Institute of Chicago. Series of color prints of well-known paintings, with lives of artists, $14" \times 11"$. 17 subjects issued, 25c each. Price list of other reproductions, photographs, postcards, etc., issued by Art Institute.

6 Atkinson, Mentzer & Company, 24 W. 39th St., N. Y. Rhine Prints. 1910. Collection of attractive German lithographs, chiefly decorative, pub. by Teubner. Illustrations are colored and excellent. Prices higher than in Germany. One of the few firms in this country which keeps these pictures in stock.

7 Ball, James T. Detailed working drawings of the five orders of architecture. For sale by William T. Comstock Co., 23 Warren St., N. Y. 17 plates, $14" \times 21"$. Price, unmounted, \$4; mounted on muslin, \$6.50; on cardboard, \$7.50.

8 Berlin Photographic Co., 1, Stechbahn, Berlin; 305 Madison Ave., N. Y. Makes specialty of photogravures and photographs of famous paintings, old and modern. Comprehensive illustrated catalog issued 1905. Photogravures, \$1.50 to \$50. 1910 catalog, a selected, illustrated list of publications.

Bibliotheca Paedagogica. 1911. Superseded by Schulwart. See Source 66.

9 Boston Museum of Fine Arts, Boston. Sepia reproductions of paintings and objects in museum; Egyptian, Assyrian, Greek and Roman art, 8" x 10". Price, 40c.

10 Brown, George P. & Co., 38 Lovett St., Boston. Subjects, sizes and prices similar to Perry Pictures. (See Source 55.) Illus. catalog.

11 Bruckmann, F. Pigment prints, copies of famous paintings in European galleries; silver prints \$1.50, color prints \$2.50, sizes 22" x 18"; carbon prints, 12" x 9", 25c. Full catalog, some illustrations. See also Medici Society Catalog.

12 Brunn and Bruckmann, Munich. Denkmaler griechischer und romischer sculptur. Set of 50 plates, black and white, 11" x 15". May be bought of Stechert. (See Source 70.) Rather small for wall decoration, but clear, good reproductions for class work.

13 Burne-Jones. Pictures of Wonder and Romance. London, Russell. Book contains many full-page illustrations which can be used for study of literature. To be bought second hand.

14 Busse, George, 20 E. 48th St., N. Y. Imports pictures for schools and libraries, free of duty. Carries in stock large assortment of German lithographs, including full collection of Seemann publications.

15 Character Sketches. Selmar Hess, New York. Series of etchings and engravings after paintings. 68 parts, bound in paper. Useful in study of modern languages, history and literature. To be bought second hand.

16 Chicago Art Education Co., 218 So. Wabash Ave., Chicago.
a. Photographs of sculpture, painting, architecture and travel. Various sizes and prices. b. Sculpture and pottery for school use.
c. Carry stock of Guerin, Copley, Fitzroy, Rhine and Seemann prints.

17 Collins, Frank H. Drawing and Constructive Work for Schools. Plates, 10" x 13". 1st series, 75c; 2d series, 29c; 3d series, 50c. To be bought from any large book dealer.

18 Cosmos Pictures Co., 119 W. 25th St., N. Y. Subjects similar to Brown and Perry pictures. (See Sources 10, 55.) Black and white, with slight green tint, printed on rough surfaced paper. Regular size, 6" x 8 $\frac{5}{8}$ ". Other sizes, 9" x 15" and 10" x 13". Prices, 2c to 5c each. Illus. catalog.

19 Costume. a. Civil costumes in England from the conquest to the regency. Menken, London. b. Racinet. *Le Costume Historique*. Firmin Didot, Paris, 1888. 6 v. 500 plates in color. c. *Zur Geschichte der Kostume*. Braun & Schneider, Munich. 123 color plates. All valuable books now out-of-print but may be bought second hand.

20 Curtis & Cameron, Pierce Bldg., Boston. Gray and sepia prints of pictures chiefly by American artists. Include decorations in Library of Congress and Boston Public Library. Large sizes, 24" x 34", \$10 to \$12; 38" x 56", \$25 to \$30. Among the small prints is a set of Abbey's Holy Grail pictures. Size of each, 4" x 5". \$5 for the fifteen panels. Catalog and special leaflets issued.

21 Davis Press, Worcester, Mass. a. Guild alphabet folio. b. Capitals, small letters and figures. c. Monastic text. d. Roman text. e. Decorative initials. 25 sheets in a packet, 30c.

22 *Dekorative Vorbilder*. German continuation issued irregularly; subscription price, \$3. Four or five colored plates, 9 $\frac{3}{4}$ " x 13 $\frac{3}{4}$ ", with each issue. Great variety of subjects covered; design of all kinds, friezes, landscapes, marines, stained glass, posters and symbolic pictures.

23 Detroit Publishing Co., Vermont and Linden, Detroit, Mich., 15 W. 38th St., N. Y. Aac prints, colored facsimiles of modern paintings, American and foreign, about 250 subjects from American galleries, sizes up to about 30" x 18", average 21" x 17". Rather small for wall pictures. Prices, \$2.50 to \$10. Brief illus. list. Largest Aac photographs of scenery and architecture, American and foreign, 6" to 12" x 25" to 35". Price, \$3. Average size, 17" x 21". Catalogs.

24 Educational Supply Association, 42 Holborn Viaduct, London, E. C. Catalog of school supplies: maps, pictures, diagrams, etc. Series of 12 pictures illustrating scenes and characters from English history. Sepia, 27" x 35", unmounted, 62c each. Illus. catalog.

25 Elson, A. W. & Co., 146 Oliver St., Boston. Catalog of large carbon photographs, photogravures, engravings, etchings and copper plate paintings. 1908. Subjects chiefly architecture, sculpture, painting and portraits. They publish Frieze of the Prophets, by Sargent, 61" x 11½", costs \$18. Prices, \$3 for pictures 24" x 11" and \$12.50 for those 36" x 24". Shorter lists on special groups include prints of Egyptian architecture and Greek and Roman architecture and sculpture. Size, 9" x 12". Price, \$1.25 per set of 10 prints. Single prints, 10c. Illus. catalog.

26 Fine Arts Publishing Co., 29a Charing Cross Road, London, W. C. Historical Paintings in House of Commons. Subjects: a. Origin of Parties: Plucking red and white roses in Old Temple Gardens. b. Age of Discovery: Henry VIII granting sailing charter to John Cabot and his sons, A. D. 1499. c. New Learning in England: Erasmus and Thomas More visit children of Henry VII, A. D. 1499. d. Cardinal Wolsey at the trial of Catherine of Aragon and Henry VIII, A. D. 1529. e. Protestant Reformation: Latimer preaching before Edward VI, A. D. 1548. f. Entry of Queen Mary I into London. Fine color prints, about 21" x 21", £2 2s. for the six panels, if ordered direct. An additional subject, "How the Danes Came up the Channel 1,000 Years Ago," 15s. Descriptive leaflet.

27 Flax Spinning Co., York St., Belfast, Ireland. Prints illustrating linen manufactures and samples, \$3.

28 Foord, J. Decorative flower studies. Batsford, London. 2v. 80 color plates. \$7 to \$10 a part. May be bought of Stechert. (See Source 70.)

29 Fragments. Pub. by the H. C. Perleberg Co., 376 Central Ave., Jersey City, N. J. 42 photographic plates, 9¾" x 11¾".

AIDS IN HIGH SCHOOL TEACHING 157-27

Subjects for illustration and poster work on each plate. Price, \$9.90. May be ordered direct from publisher.

30 Gerbel, A., 133 W. 13th St., N. Y. Imports pictures for schools and libraries, free of duty. Carries large assortment of samples.

31 *Geschichte der Kunst*. Ludwig Justi, comp. Berlin, Fischer & Franke. Half-tones, 9" x 12". *Geschichte der Baukunst-Altertum*. *Geschichte der Plastik—Die Plastik der neueren zeit in Italien*. *Die Italieniesche Plastik v. XV bis XVIII Jahrhundert—Die Bronzeplastiker*. May be bought of Stechert. (See Source 70.)

32 Hanfstaengl, Franz, Maximilian Strasse, 7, Munich. 545 Fifth Ave., N. Y. 10 lithographs, chiefly of English history, for schools. Bright, clear colors, 26" x 19", set of 10 costs \$20, single plates, \$2.50. Separate list.

33 Hart, Schaffner and Marx, 36 So. Franklin St., Chicago. Issues as advertisements very beautiful lithographs of American history, many drawn by Edward Penfield. Given away by firm. Among larger lithographs are Old Peter Stuyvesant, The Old South, etc. Colored, 13" x 18" and 13" x 24".

34 Historical Material: a. New England History Teachers' Association. Catalogue of the Collection at Simmons College, Boston. Houghton. 1912. First printed in History Teachers' Magazine, April and May, 1911. Includes maps, atlases, globes, stereographs, postcards, general pictures and casts. Best analysis of illustrative material. b. History Teachers' Magazine, June, 1913. Illustrative material for history classes. A. E. McKinley. Annotated list of dealers in pictures, photographs and projection apparatus. Mos. valuable list of the kind.

35 Hoppe, Feodor. *Mythologie und Geschichte der Griechen und Romer*. Carl Graeser, Vienna. 30 plates, including portrait bust of Homer, 12½" x 16½". \$5 for set in portfolio.

36 Huyler's, 18th and Irving Sts., N. Y. Set illustrating growth of the cocoa tree and preparation of cocoa. Black and white, 16" x 14", free.

Japanese prints, see Matsumoto Print Works.

37 Jones, Owen. a. Grammar of ornament. 112 plates. Day & Son, London. b. Examples of Chinese ornament. London, 1867. Fine color plates. Both out-of-print, but may be bought second hand for \$8 or \$10.

38 Lettering by Woolliscroft Rhead. Batsford, London, 1903. Alphabet of Roman capitals, taken from Trajan's Column. Size of plates, 7½" x 11½". Price, about \$6.50.

39 Lewis, Graceanna. Media, Pa. Tree leaf charts of deciduous shade, nut and timber trees, native and foreign, adapted to northern or middle Atlantic States. Black and white, 29" x 18". Series of 15 numbers, divided into five parts of three numbers each. Single numbers, 50c; parts, \$1.40, and the 10 numbers now printed, \$4.50. List.

40 Librairie Armand Colin. Tableaux muraux d'Histoire, by Ernest Lavisse and A. Parmentier. Eight large, colored pictures of the history of civilization of France. Unmounted, double-faced paper, 75c each. Mounted, \$1.60 each. (See Source 34.)

41 Loescher, Ermanno & Co. 88 Via Due Macelli, Rome. Reconstruction of Rome. 2 parts. Colored halftones and photographs in two sizes, 14¾" x 10¼", and 21¾" x 15¼". About 75c and \$1.25 each. Order through any art importer. (See Sources 30, 70.)

42 London Stereoscopic and Photographic Co., 54 Cheapside, London, E. C. Photographs of English architecture, general views, and portraits of well-known people. Silver prints, 20" x 16", \$3.75; carbon or platinum prints, \$4.50, other sizes made to order. Catalog.

43 Longmans, Green & Co., 4th Ave. and 30th St., N. Y. a. Series of 12 pictures of English history from Roman times to

present day. Colored, 24" x 18"; the set, \$10.50, single plates 90c. Catalog illustrated in color. b. Set of 10 flower pictures, colored halftones, 18" x 14", cost \$7.50; single plates, 75c. Descriptive leaflet.

44 Longman's Historical Illustrations. Plates of English history from 11th to 16th century. Black and white, 12" x 9½". Six portfolios of 12 plates each. 90c for each portfolio.

45 Masters in Art. Boston, Bates & Guild. Illustrated monographs, each devoted to one painter. 110 parts issued in paper binding and in boards. 25c each part. Descriptive leaflet.

46 Matsumoto Print Works, Nagoya, Japan. Japanese color prints, reproductions and originals, large and small, decorated towels, stencils, etc. Prices for prints 10c up. Can be sent to any post office in United States by parcel post. Article and postage payable with order. Duty payable at post office when received. Allow three months for filling orders in the United States. Lists issued.

47 Medici Society, 7 Grafton St., London. Foster Brothers, 4 Park Square, Boston, sole agents in United States. Medici Prints, reproductions in color after old masters. Issued occasionally. Printed by collotype process on excellent paper. Subscription of \$23.50 has advantages over list prices offered. Plates, \$5 to \$20. Size varies according to originals, the smallest listed being 7⅞" x 6¼", and the largest 109" x 106". Illustrated catalog. Also has recently issued "Popular Medici Prints," a new series, reproducing in color famous paintings. Average size, 9" x 12"; single plates, \$1.75.

48 Mentor Association. 52 East 19th St., N. Y. The Mentor. Issued bi-monthly. Six loose plates, in sepia or colors, with each number. 107 numbers issued to date. Great variety of subjects. \$3 a year; 15c single number.

49 Mumford, A. W. 536 South Clark St., Chicago. Publishes bird and nature pictures in colors. a. Subjects include animals, plants and flowers, insects, fish, marine life, fruit and minerals.

Size, 7" x 9". Price, 2c each or \$1.80 per 100. Special prices for large quantities. List of 648 subjects issued. b. Special set of three series of forest trees in photogravure, 9" x 12". 40c for each series of eight pictures, or \$1 for complete series.

50 Natural History. Raphael Tuck, London. 30 colored plates of animals and insects, with a few plant forms. Descriptive text on each plate. 16" x 25", in portfolio.

51 New York State. Commissioners of Fisheries, Game and Forests Report. Excellent black and white plates of forests and mountain scenery and color plates of fish, birds and insects. To be bought second hand.

52 New York Times. Has issued colored picture supplements: a. Abbey's paintings of the Holy Grail. b. Sargent's Frieze of the Prophets. c. Paintings in the Altman Collection. d. Paintings in the Morgan Collection. e. Boutel de Monvel's Joan or Arc mural paintings.

53 Nystrom, A. J. & Co., Chicago. a. Johnston's Anatomy and Physiology Charts. 12 colored charts on anatomy, physiology, sanitation, hygiene and the effects of alcohol and narcotics, 30" x 40". Unmounted, \$1 each. Mounted on cloth with plain roller, \$1.25. b. Advanced Botany Charts, 42" x 50", mounted on cloth, roller top and bottom, \$3.20. c. Land Form Pictures, 66" x 75", mounted on cloth, roller top and bottom, \$8 for set of 12. Geographical and historical pictures by the German publishers Geistbeck, Cybulski, Gurlitt, Lehmann and Seemann. (See Source 66.) Higher in price than when imported direct from publisher. Complete catalog issued.

54 Parthenon. Ch. Eggiman, Paris. Introd. Maxime Collignon. 1910-1911. Eight parts. Over 100 fine plates of the interior, exterior and the friezes, 12" x 20". Price, per part, \$4.

55 Perry Pictures Co., Malden, Mass. Black and white pictures of paintings, sculptures, famous buildings, historical subjects, etc. Colored pictures of birds, animals, insects, etc. (See Source 48.) 3" x 3½" to 10" x 12", ½c to 7c each. Illus. catalog.

56 Philadelphia Ledger. Colored supplement pictures of the William Penn Colony mural paintings, by Violet Oakley, in the Capitol at Harrisburg, Pa.

57 Philip, George & Son, 32 Fleet St., London. Illustrated guide to geographical and educational publications. Maps of the ancient world are especially suited to teaching of ancient history. Their catalog includes lithographs of plant life, animal life, and human physiology. Many of their lithographs are listed in Schulwart: a. Pictures illustrating history of civilization in Europe. Colored, 35" x 27"; single plates, \$1.25. Many are sold by Lehmann (see Schulwart) for 65c. b. Types of nation series. Colored 35" x 30"; single plates, 87c. c. Half crown series of trees, plants and the like. Colored, 25" x 20"; single plates, 65c. d. Nature-study, insect life. Colored, 40" x 29"; single plates, \$1.25. Many are sold by Balslev and Anderson (see Schulwart) for 65c. e. Philip's culture series, plants used for food and manufactures. Colored, 35" x 30"; single plates, 87c. f. Philip's series of classical, historical and scriptural maps, 29" x 23"; single plates, 87c. g. Conversational lessons. Colored, 33" x 24", 87c. h. Object lesson pictures, plant life. Colored, 30" x 23", 62c. i. Philip's series of land forms, climate and vegetation, 25" x 20"; single plates, 31c.

58 Prang Co., 30 Irving Place, N. Y. a. Dieffenbach's Silhouettes. Ten pictures in set, 14½" x 7½". \$5 a set. b. Stone age pictures. Color prints, 15" x 21", 75c each or \$5 for set of eight pictures. Other sets useful in grade schools are issued. Descriptive leaflet.

59 Prisse D'Avennes, A. C. T. E. Monuments égyptiens. Costly set of excellent plates illustrating Egyptian architecture, painting, ceramics, industrial art, etc. Colored, 12" x 19". May occasionally be picked up second hand.

60 Railroad maps and circulars. Useful maps and pictures issued by railroads and given away as advertisements.

61 Reider, F. & Cie, 101 Rue de Vaugirard, Paris. Collection Scolaire de Tableaux Geographiques. 40 pictures, in color; four views on a sheet 24" x 18". Largely views of French scenery, buildings and manners and customs, and a few other European countries. \$5.50 for set.

62 Ried, Frederick W. Designs in leather, with working patterns. Milton Bradley Co., Springfield, Mass. 19 plates with descriptive text, 9" x 12", 75c.

63 Rom, N. C. Copenhagen. Danish historical charts, including good pictures of the Vikings. Colored, 31" x 19"; single plates, 55c. Illus. catalog

64 Sabin, Frances E. The Relation of Latin to Practical Life. A manual and 60 charts, 22" x 28", for an exhibit in answer to the question, "What's the use of Latin?" Manual and 60 cards, \$4. Express not prepaid. Manual alone, including postage, \$1.50. Extra blank cards supplied at cost. Address Miss Frances E. Sabin, Oak Park, Ill.

65 School Arts Magazine. 120 Boylston St., Boston. The Alphabeticon. March, 1916, and succeeding numbers, list, under "Alphabeticon," illustrative material with headings classified according to index, repeated in each number. The illustrations in each issue thus become a ready source for pictures and may be taken out and mounted.

66 Schulwart. 1914. Trade list of pictures, decorative and educational, of models, books and other educational supplies offered for sale by German publishers. Contains publications of many houses, conveniently arranged and with detailed indexes. It lists subjects, publishing houses, titles of pictures, but does not index artists by name. Special indexes for material on Botany, Zoology and Physics. The many hundred pictures of a more distinctly educational nature are listed only in their several proper departments. Any of the materials listed may be imported free of duty by schools and libraries. Indispensable. May be bought of Stechert (see Source 70) for about 40c, paper, and 65c, cloth.

67 Seeman's Katalog der farbigen Kunstblätter. Colored half-tone reproductions of old masters and of modern artists. Average size 9" x 7"; price, 20c to 25c.

68 a. Shepp, J. W. Shepp's Photographs of the world. Phila., Globe Publishing Co., 1892. b. Queen's London. Cassell. c. Ireland in Pictures. Chicago, Hyland & Co. d. Olivares, José de. Our Islands and Their People. e. Stoddard, J. L. Sunny Lands of the Eastern Continent; Stoddard's Art Series; Glimpses of the World; Tour Through Northern Europe. Good-sized, black and white pictures in large folio form, descriptive text beneath each picture. For teaching agriculture, civics, history, architecture, etc. Almost all are out of print, but copies are still available second hand.

69 Speltz, Alexander. Das Farbige Ornament aller historichen stile. Baumgartner, Leipsic. Six parts issued, consisting of five colored plates, 11" x 15", descriptive text in German. Historic ornament of all ancient countries. \$1.35 each part. May be ordered from Gerbel. (See Source 30.)

70 Stechert, G. E., 151 W. 25th St., N. Y. Imports pictures to schools and libraries, free of duty.

71 Thompson Publishing Co., Syracuse, N. Y. These prints are not uniformly good, but the subjects are of value. Blue prints, 4" x 5", 1c each; 8" x 10", 10c each. Includes sculpture, painting, history, industries and a good collection for the study of English literature.

72 United States Department of Agriculture. Weather Bureau. Charts of cloud forms. a. Blue print, 23" x 16", 5c. b. Classification of clouds, colored, 24" x 20", 25c. Apply to Supt. of Documents, Washington, D. C.

73 United States Department of Agriculture, Office of Experiment Stations. 15 charts on food composition, by C. F. Langworthy. Colored, 18" x 26"; \$1 for the set.

74 United States Department of Commerce and Labor. a. Bureau of Standards, International Metric System. Colored,

45" x 29". b. Bureau of Statistics. Transportation routes. Colored, 19" x 24". United States Geological Survey. Topographic sheets for any section of a state. Get name of block from key map and send name and address, giving city and county, to Director of the U. S. Geological Survey. Single sheets, 5c.

75 University Art Shop, 1604 Chicago Ave., Evanston, Ill. Colored halftones of paintings by Jules Guerin, of French chateaux, public buildings of historic interest in the United States and views on the Mediterranean. Size, 16" x 24"; cost, \$6 in sheet ready for framing, and \$6.75, with underlay on ripple board mount. Size, 15" x 10"; cost \$3.50 and \$4, with underlay. These are publisher's list prices, subject to trade discount.

76 University Prints. Bureau of University Travel, Boston, Mass. Black and white prints, 8" x 5½". Sets of 500 for \$4. Subjects include Greek and Roman Sculpture, Dutch, German, French and Italian art.

77 Utamaro. 12 Japanese prints by this artist, showing the silk industry. 10" x 15". About \$5 for the set. Order from Matsumoto (see Source 46) or from any large dealer in Japanese prints.

79 Ward, Artemas. 50 Union Square, N. Y. 80 color plates from the Encyclopedia of Foods and Beverages. Size, 8" x 11". Includes plates showing cuts of meat. Unmounted, \$2.50 set. Mounted on heavy cards, \$4. \$2.50 for any selection of 40.

Photographs and Postcards

No attempt has been made to make complete the following list of sources of postcards and photographs. It names a few of the less obvious sources from among those we have found of value. The list could be made of great length; but this seemed unnecessary with such excellent lists already in print as Miss Abbot's (see Source 1) and those issued by New England History Teachers Association (see Source 34).

Photographs

79 Boston Museum of Fine Arts, Boston. Photographs of the paintings, sculpture and miscellaneous objects in the museum. 8" x 10", in gray or sepia; by mail, 45c each.

80 Boston Photo News Co., 114 State St., Boston. 12 views of the Shakespeare country. Size, 6½" x 8½", unmounted. \$2 for set.

81 British Museum. Have on sale hundreds of photographs in standard foreign size, 50c each. Also issue photogravure plates of Greek and Roman antiquities. Six parts; four plates, 8" x 10", to a part. Price, \$2 for set. Photogravure and collotype plates of paintings, Greek and Roman sculpture and miscellaneous objects, 10" x 12½"; cost, about 20c each.

82 Chicago. Art Institute of Chicago. Photographs of all objects in the institute, in three finishes, at 25c and \$1 each. Size, 8" x 10". Special photographs by such firms as Braun, Clement & Co., Detroit Publishing Co., etc. Descriptive leaflet.

83 Frank Cousins Art Co., 1170 Broadway, N. Y. Art and architectural subjects, including excellent examples of colonial architecture. 8" x 10", unmounted, 50c each.

84 Lincoln, Edwin Hale. Pittsfield, Mass. Unusually fine photographs of trees and flowers, and special set of ship pictures of the old types. Sizes and prices vary. Average print, size 7½" x 9½", costs 75c.

85 Metropolitan Museum of Art, N. Y. Photographs of objects in the museum collections made by the museum photographer and such firms as Elson Co., Boston and Detroit Publishing Co. Prices from 5c to \$15, depending upon finish of photograph. Special school set of 100 subjects, 4" x 5", titles written on back of each, \$5.

86 National Parks. a. Department of Interior, Mines Building, National Parks. Furnish to institutions at cost price, black and white or plain photographic enlargements. Subjects cover Glacier,

Crater Lake, Rocky Mountain and Yosemite National Parks and the Grand Canyon. 20" x 25", black and white, \$1.25; sepia, \$1.75. 30" x 36", black and white, \$3; sepia, \$4. b. Pillsbury's Pictures, 219 Powell St., San Francisco, Cal. Subjects include the Yosemite, Lake Tahoe, California Big Trees, California Missions, Canadian Rockies, etc. Sizes from 5" x 7" to 24" x 26". 60c a dozen to \$6.50 each. Catalog issued. c. Haynes Photo Studios, Selby Ave., St. Paul, Minn. Photographs of Yellowstone Park, in colors, black and white and sepia. Sizes, 4" x 5" to 6" x 21", 10c to \$2.50. Catalog issued.

87 Northend, Mary. 8 Baxter Square, Salem, Mass. *Photographs of historic houses, colonial gateways, etc.* Price, uncolored, 50c each.

88 Venice. Ferd. Ongania, ed. 13 colored photographs of Venice. Price, \$1 each. To be bought of Stechert. (See Source 70.)

Postcards

89 Bell, G. & Sons. York House, Portugal St., London, W. C. Bell's Latin Picture Cards. Two sets issued include poets and prose writers. Complete set of 16 cards, 32c.

90 British Museum, London. Large selection of platinum post card views of Museum collections. May be ordered from Stechert (see Source 70). Two for 5c.

91 Cartwright, R. S. 8 Johnson Court, Fleet St., London, W. C. Six colored cards of incidents in life of Dr. Johnson. 15c for the set.

92 Chicago. Art Institute of Chicago. Post cards in sepia and colors, 1c each. Include painting, sculpture and views of the building.

93 Detroit Publishing Co., Detroit, Mich. N. Y. address, 15 W. 38th St. *Photint Journeys*. Views of the United States; clear pictures and well colored. 40 in a carton, \$1. Descriptive leaflet.

- 94 Drama League of America. 1145 Marquette Building, Chicago. Two sets of postcards, one in color, showing scenes from Shakespeare's plays. Ten subjects in set. 5c each card.
- 95 Eau Claire, Wis. Public Library. 24 photographic postcards of lumbering scenes in the west. Price of set, \$1.75.
- 96 Haynes Photo Co., Selby Ave., St. Paul, Minn. Colored cards of Yellowstone National Park. 50 assorted cards, 50c. Postage extra.
- 97 Little Craft Shop, Hartford, Conn. Sells for an Italian firm postcards, in color, of the old masterpieces; 5c each.
- 98 Metropolitan Museum of Art, N. Y. Post cards of antiquities, painting, sculpture, etc., in the museum, 5c each. List issued.
- 99 Reinthal and Newman, 106 W. 29th St., N. Y. Colored reproductions of works of art, Musee series of old masters and pictures by Jessie Wilcox Smith and other American artists, 5c each.
- 100 Szalatnay, R. D. 542 E. 79th St., N. Y. Colored postcards of Bohemian and Hungarian costume, manners and customs. 100 subjects for \$5.
- 101 Ye Olde Cheshire Cheese. 145 Fleet St., London. Six sepia postcards, 25c.

Aids in Teaching Certain High School Subjects

The Subjects chosen for this Pamphlet are English, the history of England, Greece and Rome (Latin language).

Under these groups of subjects, the numbers which follow titles and special sources of pictures, refer to the List of Sources just preceding. There are given the source of each picture, its size and price.

In some instances more than one source is referred to by number for the same picture. Out-of-print and second-hand material of value is also included, as it is sometimes available through other sources than regular dealers.

Special mention of Schulwart (Source 66), the large German trade list, seems necessary. The scope of this catalog is so great that we refer only to material listed in it that we have had experience in using. References to it are made by source number and publisher.

High School Subjects under which Illustrative Material is here arranged

English

Chaucer: his Life, Times and Writings

Wall Pictures:

Canterbury cathedral 42

Canterbury pilgrims 32

Pictures Mounted on pulp board, 13" x 17½": (We thus designate in this list certain pictures, because in our method of handling and storing our collection we mount pictures which are 12" x 17" or less on sheets of pulp board 13" x 17½" and stand them in boxes like cards in a catalog. See pamphlet in this series, Picture Collection.)

Portrait of Chaucer 10

Canterbury pilgrims 55

Canterbury cathedral 68

Coburn players in Canterbury pilgrims. Theatre, Sept., 1909

Prioresses tale. Burne-Jones. Internat. Studio, Special number,
Art in 1898; 13; 45 v 2 plate VII

Dante's Dream. Rossetti. 45 v 4 plate V

Chaucer's Pyramus and Thisbe, Dante's Beatrice, etc. 13

Other picture material from miscellaneous sources follows:
Sewall's painting of Canterbury pilgrims; illustrations by Walter Crane; Tabard Inn; old engravings of Pilgrims to Canterbury, Stothard; Canterbury pilgrims, Blake; Chaucer and the Canterbury pilgrims; Petrarch and Laura, Dicksee; Boccaccio, Cassioli.

Ivanhoe: the Story and the Period

Wall Pictures:

Baronial Hall 57a

Crusaders 32

Feudal castle, 13th Century 66 Lehmann

Holy Grail. Abbey 52

Sir Galahad. Watts. Many sources

Siege of a city, 14th century 57a

Tournament 66 Lehmann

Mounted Pictures, etc.:

Scenes from Ivanhoe 71

Castle life, costume, mediaeval warfare, etc. 44

Castle life in the middle ages. Scribner's, Jan., 1889

Land of Scott. Mabie. Outlook, Dec. 5, 1903

Michaud's History of the Crusades. Illus. Doré. To be bought second hand.

Colored pictures of mediaeval life, Pyle; clown from a cover of Collier's; castles, knights and other pictures of chivalry are easily obtained in booklets, magazines and old engravings.

Johnson: his Life, Times and Writings

Wall Pictures—None available

Mounted Pictures, etc.:

Portrait of Samuel Johnson. Reynolds, 55; 45 v 3 plate IX

People of his time: Gainsborough. 45 v 2 plates III, VIII, IX;

Reynolds. 45 v 3 plates III, VI, VIII

Times and manners: Goldsmith's Deserted Village. Illus.

Abbey. Harper's Magazine, Feb.-Sept., 1902

Bicentenary of Dr. Johnson. London Graphic, Sept. 18, 1909

Portraits of Reynolds, Gainsborough and Romney 71

London of George II. Besant. Harper's Magazine, Jan., 1892

Good additional material: Cheshire Cheese 101; old engravings of members of the club; Burke, Johnson and their friends;

Dr. Johnson in the ante-room of Lord Chesterfield; Literary party at Sir Joshua Reynolds; Dr. Johnson reading the Vicar of Wakefield; Goldsmith, Boswell and Johnson; Dr. Johnson's Penance; Dr. Johnson and Goldsmith.

Julius Caesar: the Man and the Play

Wall Pictures:

Arrival of Julius Caesar 66 Gurlitt
Caesar's triumphal procession 66 Lohmeyer
Reconstruction of Rome 41
Roman camp 53; 66 Cybulski
Roman forum 16; 53; 66 Seemann
Roman soldiers 66 Lehmann
Shakespeare reading to Queen Elizabeth 32

Mounted Pictures, etc.:

Shakespeare portraits, home and country 10; 55; 68a; 94; 48
(ser. 107)
Shakespearian costume: Titian. 45 v 1 plate IX
Golden and highly colored Shakespeare. Sketch, Feb. 25, 1914
Origins of English stage. Illus. London News, Dec. 25, 1909
Shakespearian plays. N. Y. Times supplement, May, 1916. 94
Homes and haunts of Shakespeare. Russell, London. To be
bought second hand

Shakespearian material is so easily procured that no other sources are given. See also pictures listed under Latin; Lesson in the arena, Blashfield; old engravings of Antony making speech over Caesar's body; Death of Caesar.

Odyssey of Homer

Wall Pictures:

Apollo 12, 66	Hermes 66
Athena 12, 66	Homer 12
Diana 66	Jupiter 66
Hera 66	Laocoon 66

Menelaus and Patroclus 66 Odysseus and Polyphemus 66
Minerva 66 Teubner
Odysseus 12 Ulysses and cattle of the sun 66

In the above lists 66, unless followed by publisher's name, refers to Seemann publications which are also listed in 16 and 53.

Mounted Pictures, etc.:

Portrait of Homer 18; 34

Hermes. Praxiteles. 44 v 3 plate II

Athena. Parthenon friezes. Phidias. 44 v 3 plates V, VII, VIII, IX, X

Grecian masterpieces 48 (ser. 74)

Greek myths 13; 33; 34; 70; 75; Parrish illustrations. Collier's, 1906-1910

Greek sculpture 1; 30; 33; 34; 44; 48 (ser. 101); 54; 55; 80; 84; 97

Greek girls playing ball. Leighton. 18

Old engravings of the following will be found useful: Ulysses ploughing the seashore; Danaides; Ulysses deriding Polyphemus; Hector and Andromache; Aeneas relating his story to Dido; Psyche and Charon.

Milton: his Life, Times and Writings

Wall Pictures:

Charles I, visit to House of Commons 43

Interior Cologne cathedral 16; 53; 66 Seemann

Mounted Pictures, etc.:

Portrait of Milton 48 (ser. 97); 55

Milton's home 48 (ser. 97)

Oliver Cromwell 48 (ser. 80); 54

Aurora. Guido Reni. 45 v 4 plate VI

Mitred Locks: St. Basil. El Greco. 45 v 9 plate VI

Court costume: Charles I. Wife of Charles Van Dyke. 45 v 1 plates IX, X

L'Allegro. Illus. Parrish. Century, Dec., 1901

Poet's corner, Westminster Abbey 68b

Milton reading with Andrew Marvel 55

English scenery: Homes and haunts of Shakespeare. Russell, London. To be bought second hand

Milton dictating "Paradise Lost" to his daughters 48 (ser. 97)

Other pictures may easily be found, as: Cromwell dictating to Milton, Ford Madox Brown; picture of a yellow primrose; old engravings: Windsor Castle; Thames river from Richmond Hill; Milton visiting Galileo; Rout of Comus and his band; any cloister (Oxford); interior of a Gothic cathedral (Westminster Abbey)

Silas Marner

Wall Pictures:

At the loom 66 Teubner

Mounted Pictures, etc.:

Silas and the child, the cottage, Eppie and her father 71

English village life. Hunt. Outlook. May 7, 1904

Costume: Portrait of John Wauchope. Raeburn 45 v 6 plate VII. Pretty Peggy Ballad Book. Emmett. Dodd, Mead & Co., New York

English cottage, manor house and garden: Homes and haunts of Shakespeare. Russell, London. To be bought second hand

Pictures often asked for but not easily procured are: English tavern, with bar and barmaid; hunting scene, huntsmen in red coats; interior of an English country house. Costume should be early nineteenth century.

Study of Literature: Literary Values

Imaginative. Flight of night. Hunt. 45 v 9 plate V. Death. Watts. 45 v 6 plate II

Realistic. Woman reading. De Hooch. 45 v 3 plate VIII

Naive. Hermit. Boecklin. 45 v 7 plate I

Melodramatic. Napoleon. David. 45 v 7 plate I
Falsely pretty. Songs of Spring. Bouguereau. v 7 plate IX
Classic. Madame Recamier. David. 45 v 7 plate I
Romantic. Isle of death. Boecklin 45 v 7 plate II. Sacred
grove. Boecklin. 45 v 7 plate IX. Discus Thrower. 48.
Rodin's sculpture

Treatment of Humble Life

Direct, simple. Woman spinning. Gleaners. Millet. 45 v 1
plates VII, VIII
False, poetized. Hermann und Dorothea. Ramberg. Seifert,
Stuttgart. 71. Shepherdess. Bouguereau 55

Treatment of Nature

Faithful. Hay Wain. Constable. 45 v 7 plate X
Poetic. Dance of nymphs, Landscape, Orpheus greeting the
morn, Bathers and Ville d'Avray. Corot. 45 v 2 plates
I, II, III, IV, VII

Description and Narration

Painters of western life. 48. Story of the American railroad.
40. Covers and special pictures by Maxfield Parrish in Col-
lier's, 1906-1910. Also pictures from the following maga-
zines: Country Life in America, Jugend, Ladies' Home
Journal and Travel.

History of England

Wall Pictures:

Armada in the Channel 43	Jane Seymour 16; 53; 66
Baronial hall, 13th century 57	Seemann
Charles I of England 16; 53;	King Alfred and the Danes 24
66 Seemann	King Arthur's Knights 32
Charles I, visit to House of	King John seals Magna Charta
Commons 43	24, 43

- Children of Charles I 16; 53; Magna Charta, 1215, Facsimile. Source unknown
 66 Seemann
 Crusaders 32 Religious procession, 15th century 57
 Danish raid 43
 Defeat of the Armada 32 Richard Coeur de Lion's sight of Jerusalem 43
 Dreadnought and Victory, Saint Augustine and King Ethelbert 43
 Portsmouth 43
 Early Britons 32
 Feudal Castle, 13th Century Siege of a city, 14th century 57
 66 Lehmann
 Harold's last stand at Senlac 43 Simon de Montfort and Henry III 24
 Henry V at Agincourt 43 Stone age 58b
 Henry V in the Concordat at Worms in 1122, 66 Lohmeyer Stone and bronze ages 63
 Tournament 66 Lehmann
 Homestead at beginning of civilization 57 Viking age, Funeral feast in the king's hall 63
 Houses of Parliament paintings Viking age, Funeral of a chief 63
 26

Mounted Pictures, etc.:

- World's Pictorial History of the Nations. To be bought second hand
 England from 11th century to 15th century 44
 Historical scenes and incidents 34a
 Charles I. Van Dyke. 45 v 1 plate IX; 48 (ser. 80)
 London Tower; Nelson's monument 68
 Michaud's history of the crusades. Illus. Doré
 Princes in the tower. Millais. 10; 55
 Branksea castle. 68
 Costume: Holbein's paintings. 19a
 Battles of British army. Ill. London News, Oct. 20, 1894
 Coronations of English sovereigns. Illus. London News, 1902
 England under the Roman Empire. Illus. London News, April 1, 1911

London in the fourth century. Illus. London News, April 6, 1912

Birth of the British Navy: King Alfred's first sea fight. Illus. London News, April 3, 1912

Oliver Cromwell. Morley. Century, November, 1899-October, 1900. 48 (ser. 80)

Material on Queen Anne, chiefly old engravings, can be easily secured: Kensington Palace; St. Paul's Cathedral; Temple Bar; old London; furniture of the period; Hogarth's paintings; Sir Roger de Coverley; portraits of Addison, Swift, Dryden, Pope, Wren, etc.

Many pictures can easily be found in old histories, as: Norse raid under Olaf; Battle of Hastings; Landing of Saxons on shore of Britain; William the Conqueror at Hastings; Wooing of Henry V; Death warrant of Mary, Queen of Scots; Puritans and Cavaliers; Back from Marston Moor; Nelson at Trafalgar; also portraits of kings and queens. Pictures of modern pageants are useful.

History of Greece

Wall Pictures:

Acropolis of Athens 66 Teubner	Erectheum 16; 53; 66 Greek coins 53; 66
Alexander and Diogenes 16; 53; 66	Greek house 53; 66 Greek soldiers 53; 66
Alexander the Great 12	Greek runners 66 Teubner
Ancient ships 53; 66	Greek theatre 53; 66
Attack of the Athenians at Marathon 66 Lohmeyer	Homer 12 Ionic order 16; 53; 66
Caryatid 12	Olympian games 63
Corinthian capital 16; 53; 66	Panathenaic festival 63
Costumes of the ancient Greeks 53; 66	Reliefs from the Parthenon 12 Sophocles 16; 53; 66

Demosthenes 53; 66	War implements of Greeks and
Discus thrower 16; 53; 66	Romans 53; 66
Doric temple 16; 53; 66	Wrestlers 16; 53; 66

In the above lists when not followed by a publisher's name 53, 66 refers to Cybulski publications and 16, 53, 66 to those by Seemann.

Mounted Pictures, etc.:

Ancient Athens 48 (ser. 50); 68
Greek costume 19; 45 Burne-Jones. v 2 plates VII, VIII.
Moore. v 9 plates IV, X
Greek design 37; 69
Parthenon 48; 54
Greek temples 31; 48; 55
Greek life 18; 45 Leighton. v 9 plates VII, VIII, X
Golden age of Greece 48 (ser. 101)
Greek myths and sculpture 9; 25; 34a; 35; 48; 55; 81;
85; 45 Burne-Jones. v 2 plate II
Pictorial History of World's Great Nations. To be bought
second hand
Land of the Greeks. Travel, Sept., 1910 and Oct., 1907
Old Olympic games. Illus. Castaigne. Century, April, 1896
Famous siege of Tyre. Illus. Castaigne. Century, April, 1899
Tabulae Quibus Antiquitates Graecae et Romanae illustrantur.
Ed. Cybulski. Koehler, Leipsic

Useful supplementary material: Paintings by Alma Tadema and Leighton; drawings by Castaigne, Century; illustrations of modern productions of Greek drama; old engravings; School of Athens; Olympian games; Victor; Ulysses ploughing the sea-shore; Siege of Athens by Sylla.

History of Rome: Latin Language

Wall Pictures:

Ancient ships 53; 66	Reconstruction of Rome 41
Arch of Constantine, Rome 16; 53; 66	Roman aqueduct 16; 53; 66
Arrival of Julius Ceasar in Britain 66 Gurlitt	Roman camp 53; 66
Caesar's triumphal procession 66 Lohmeyer	Roman coins 53; 66
Colosseum, Rome 16; 53; 66	Roman costume 53; 66
Gladiatorial contest 63	Roman forum 16; 53; 66
Interior of a Roman House 57	Roman house 16; 53; 66
Marcus Aurelius 16; 53; 66	Roman soldiers 66 Lehmann
Pantheon 16; 53; 66	Roman triumphal procession after battle 63
Plan of the city of Rome 53; 66	Roman wall 43
	Rome under the Emperors 63
	War implements of Greeks and Romans 53; 66

In the above lists when not followed by a publisher's name 53, 66 refers to Cybulski publications and 16, 53, 66 to those by Seemann.

Mounted Pictures, etc.:

Augustus Caesar 55	Ruins of Rome 48 (ser. 46)
Ancient Rome 34b	Roman myths and sculpture 25; 35; 55; 76
Roman art 76; 81	
Roman costume 19	
Imperial Rome—Reconstruction. Illus. London News, July 29, 1911	
Romae Antiquae. Notitia. Stirling & Slade, Edinburgh	
Album des Klassischen Altertum. Rheinhold	
Pictorial History of World's Great Nations. To be bought second hand	
Tabulae Quibus Antiquitates Graecae et Romanae illustrantur. Ed. Cybulski. Koehler, Leipsic	
Latin charts. Sabin 64	

Useful supplementary material: Paintings by Alma Tadema; illustrations for Quo Vadis; old engravings, as Age of Augustus; Virgil, Horace and Varius at house of Maecenas; Roman banquet; Roman Senate; Ides of March.

On the Use in Schools of such Material as is listed in this Pamphlet

References to Books, Pamphlets and Articles on This Subject.
Compiled by the Lending Department

Abbot, Ethelred. List of Photograph Dealers, with index by countries. 1907. Published by the Massachusetts Library Club. Describes also collections of photographs in Massachusetts libraries.

Andrews, B. R. Education for the Home, 1914, p. 47: Illustrated material for domestic science classes.

Andrews, A. I. Aids to the Teaching of History. In History Teachers' Magazine, April and May, 1911. Descriptive catalog of the collection of New England History Teachers' Association. Includes maps, atlases, globes, outline maps, postcards, general pictures, casts. Classified under countries. Gives price mounted or unmounted, size, publisher, etc. The best analysis of illustrative material. This has been issued in convenient pamphlet form by Houghton-Mifflin Co., 1912.

Archer, Lewis and Chapman. Teaching of Geography in Elementary Schools, 1910, p. 240: Suggestions on the use of pictures.

Ball, S. B. Maps, Atlases and Geographical Publications. 1915. Modern American Library Economy Series. Gives list of sources used in Newark Public Library.

Bennett, C. E. and Bristol, G. P. Teaching of Latin and Greek in the Secondary School, 1906, p. 201: Photographs and casts; p. 331: Dealers in photographs, prints and casts.

Bibliotheca Paedagogica. 1911. Superseded by Schulwart.

Booth, M. J. Material on Geography which may be obtained free or at small cost. 1914. Lists educational exhibits with sources; prices omitted except in a few cases. Limited chiefly to industrial subjects. List of printed matter quite full, arranged by subject. Indicates illustrations of interest.

Bourne, H. E. Teaching of History and Civics, 1910, p. 155: Classroom pictures; p. 160-161: Excessive use of pictures; p. 221: Photographs; p. 279: Mediaeval life.

Carpenter, Baker and Scott. Teaching of English in the Elementary and Secondary School. 1908. Appendix: List of 16 picture dealers.

Burnham, W. H. and Fitzsimmons. Educational museum at Clark University; Catalogue of the Department of School Hygiene. 1912. Classified list of material on subject of hygiene with sources. Includes charts, photographs, exhibits of objects; very complete.

Committee of Eight. Study of History in Elementary Schools. 1912. Report for American Historical Association; p. 114: List of pictures with sources, size, price, for history of Greece, Rome, Christianity and mediaeval times.

Committee of Seven. Study of History in Schools. 1906. Report for American Historical Association. Appendix VIII: Atlases and maps with source and price. Maps and lantern slides recommended as cheaper than wall maps.

Committee of the Conference on Geography. Report on Governmental Maps for Use in Schools. 1894.

Connolly, Louise. Educational Value of Museums. 1914. An investigation of the co-operation between American museums and public schools.

Dodge, R. E. and Kirchwey, C. B. Teaching of Geography in Elementary Schools. 1913. Chap. XVII: Use of equipment. Appendix a: List of equipment with sources.

Emerson, Philip & Moore, W. C. Geography through the Stereoscope. 1907. Classified list of Underwood and Underwood pictures; with Teachers' Manual.

Ganong, D. F. Teaching Botanist. 1907. Chap. VI: On botanical collections and other illustrations.

Gilson, M. L. & Dana, J. C. Large Pictures, Educational and Decorative. 1912. Modern American Library Economy Series. Gives list of sources used in Newark Public Library.

Indiana University. History Teaching in the Secondary Schools. Bulletin, Sept., 1915, p. 28: Suggestions for collecting and methods for using pictures.

Johnson, Henry. Teaching of History. 1915. Chap. VIII: Making the past real. Chap. IX: Use of models and pictures. Appendix III: Bibliography of illustrative material.

Journal of Geography. Monthly. Contains frequent references to supplementary reading matter in the study of geography; lists government reports, etc., which contain valuable illustrations.

Kahn, Joseph & Klein, J. J. Principles and Methods in Commercial Education, 1914, p. 251: Commercial museums; p. 252: Pictures, stereopticons and moving pictures, maps and stereographs; p. 296: Aids in historical teaching.

King, C. F. Methods and Aids in Geography. 1907. Chap. VIII: Pictures and objects. Suggestions for use of pictures. Magazine illustrations recommended. List of well-illustrated books. List of educational exhibits (without sources). Suggestions for collecting.

Kinne, Helen. Equipment for Teaching Domestic Science, 1910, p. 44: Charts and specimens.

Krey, A. C. Bulletin for Teachers of History (University of Minnesota). 1915. Recommends use of maps, atlases, wall maps and pictures. Gives only a few of the best sources.

Lincoln, M. J. School Kitchen Text-book, 1915, p. 299: Reference to bulletins and charts.

Lloyd, F. E. & Bigelow, M. A. Teaching of Biology in the Secondary School, p. 229: The laboratory; p. 392: Zoological materials.

McKinley, A. E. Illustrative Material for History Classes. In History Teachers' Magazine, June, 1913. Annotated list of dealers in pictures, photographs and projection apparatus, including an index by subjects. The most valuable list of the kind which has been published.

McMurry, F. M., *ed.* The World Visualized for the Class Room. Pub. by Underwood & Underwood. 1915. Contains a carefully classified list of slides—stereographs and lantern slides. Mill, H. R. and others. Guide to Geographical Books and Appliances. 1910. Atlases and maps, geographical apparatus and pictures. Gives complete list of sources.

National Council of Teachers of English. 1912. English Equipment. Recommends for English work use of lantern and reflectoscope; sets of pictures; maps, etc.

New England History Teachers' Association. 1910. American Civil Government. Gives under each subject a list of forms and documents procurable from state and city departments.

Newark, N. J. Free Public Library. Publishers of Inexpensive Geographic Material. 1916. Multigraphed list arranged by publishers.

Newark, N. J. Newark Museum Association. Publications descriptive of objects, models, etc., illustrating method of teaching by objects. Stories of the Statues: 1. The Venus of Melos; 2. The Lion Hunt (Ashurbanipal); 3. The Charioteer of Delphi. Habitations of Man: 1. A Greek House; 2. A Merchant's House of the Middle Ages; 3. Life of the Eskimo; 4. The Indians of Newark before the white men came.

Animal leaflets describing German lithographs: The Bat, Boa Constrictor, Crocodile, Giraffe, Golden Eagle, Lion, etc.

Noyes, F. K. Teaching material in Government Publications. 1913. Classified list under agriculture, economics, geography,

history and nature study with annotations indicating illustrated matter. Lists maps.

Penstone, M. M. *Town Study*. 1910. Chap. IV, V and VI: Methods and helps.

Philadelphia Museums. *Geographical Collections or Class-Room Museums*. 1910. Classified list of geographical collections—including industrial exhibits, natural history, etc.—with illustrations showing methods of mounting, arranging, etc.

Rea, P. M. *Educational work of American Museums*. 1914 and 1915. Two reports issued by the U. S. Bureau of Education. Work of museums with schools.

Redway, J. W. *Teachers' Manual of Geography*. 1897. Chap. III: Use of pictures and models. Advocates magazine illustrations, moulding board and sand.

School Arts Magazine. *Alphabeticon*. March, 1916, and succeeding numbers. Describes making and use of a reference file of pictures.

Schulwart. *Ein ausführliches Verzeichnis der besten Lehr-und Lernmittel; mit zahlreichen Abbildungen und vielen bunten Beilagen*. 1914. Invaluable catalog and price list of German lithographs and school helps..

Smith, Alexander & Hall, E. H. *Teaching of Chemistry and Physics in the Secondary School*, 1910, pp. 201-5: Illustrative material, charts, portraits, photographs, minerals, crystals.

Sutherland, W. J. *Teaching of Geography*. 1909. Chap. XVII: The Value of Pictures in Teaching Geography. Chap. XVIII: Value of Illustrative Materials and Field Work. Chap. XIX: Suggestions on Weather Study. Chap. XX: Maps and Models and Their Uses. Chap. XXI: Suggestions on the Study of Soils. Suggests methods of using the material indexed; each chapter contains bibliography of the subject; sources suggested only in general.

Toothaker, C. R. *Commercial Raw Materials*. 1905. Describes the origin, processes of preparation and uses of the most important commercial materials, foods, beverages, oils, vegetable fibres, woods, gums and resins, animal products, insect products, mineral products, etc., as assembled for the use of the public schools of Pennsylvania.

United States Bureau of Education. Bulletin No. 23, 1915. Teaching of Community Civics, p. 53: Laboratory Material. University of North Carolina. Teaching of County Geography. 1915. Classified list of subjects and sources from which material can be secured free. Suggestions for use of material.

U. S. Bureau of Education. Bulletin No. 48, 1914. The Educational Museum of the St. Louis Public Schools, by C. G. Rathmann. 1915. Description with illustrations of the contents, use of material, its care and transportation to schools, of one of the most complete educational museums in this country.

Wayland, J. W. *How to teach American History*. 1914. Chap. XIV: The visual appeal in the teaching of history. Suggestions for collecting and presenting to classes illustrative material. No sources given.

Young, J. W. A. *Teaching of Mathematics*, 1907, p. 176: Mathematical laboratory and the mathematical museums.

Visual Instruction: Sources of Objects

Compiled by The Newark Museum Association

Most of the objects of which the sources are here listed will be found adapted to work in the grades. It seemed proper, however, to include them at this time.

The Newark Museum Association has made in recent years a careful study of the character and purposes of museums. We have come to the conclusion that the day of the art museum and the science museum, commonly so called, has gone by, save in exceptional cases; that in this country there is little demand for and

small use made of collections of paintings, bronzes and expensive curios of all kinds, or collections of scientific rarities and curios, installed and labeled in huge and costly buildings. While collections like these will continue to be made, and will be visited by a few, it seems clear that the museum of the future will be a teaching institution, making use in its teaching, primarily, of objects adequately labeled; these labels being expanded often into leaflets, broadsides, pamphlets and books, the teaching, meanwhile, being carried on by experts in the art of visual instruction.

In accordance with these ideas we have gathered tentatively a large collection of objects for lending. Our investigations lead us to the conclusion that a museum, properly so called, should teach to a slight extent only from the objects in its own headquarters, and chiefly from objects lent to schools, workshops and individuals.

The list which follows is made up in accordance with approved principles that may soon be carried out in modern museum management.

In compiling the list the following publications have been used:

Normal School Bulletin, Eastern Illinois Normal School,
Charleston, No. 46.

Teachers' College Bulletin, Fifth Series, No. 6, Nov. 22,
1913.

History Teachers' Magazine, June, 1913.

Items are free only when so noted. For addresses of all European dealers, see Pantheon, Esslingen, a. N., 1914.

Casts

Under this term casts we include not simply casts in plaster of sculpture and architectural ornament and kindred things. We refer more particularly to small objects or reductions of large ones, which are inexpensive, easily transported, and useful chiefly when lent and taken to schools or workshops or homes.

D. Brucciani & Co., Ltd. 254-8 Goswell Road, London, E. C.

Copies of statues. Casts of historic ornament and anatomical casts for drawing schools.

E. Charreyron & Co. Rue Bonaparte 12, Paris.

Copies of collections of Paris museums.

P. P. Caproni & Bro. 1914 Washington St., Boston, Mass.

Copies of statues, etc., for school use.

C. Hennecke Co. Milwaukee, Wis.

Reproduction of historic ornament and vase forms. Models illustrating the different stages in modeling hand, foot, bust, etc.

J. Kreittmayer. Hildegardstr. 12, Munich.

Copies of collections in Bavarian National Museum.

Kunstgewerbe Museum. Berlin.

Copies of objects in its collections.

Eugene Lucchesi. 105 E. 59th St., N. Y.

Copies of statues. Historic ornament and anatomical models for drawing.

Edouard Ponzadoux. Palais de Trocadéro, Paris.

Copies of collections in the Trocadéro Museum.

Ward's Natural Science Establishment. Rochester, N. Y.

Archaeological models.

Coins

Nicolo Majer. S. Lio 5785-86, Venice.

Latin and Imperial Roman.

Wayte Raymond. South Norwalk, Conn.

Especially Greek and Roman.

P. and P. Santamaria. Via Condotti 84, Rome.

Sulphur reproductions of Roman coins.

Charles Steigerwalt. 130 E. King St., Lancaster, Pa.

All countries.

Charles K. Warner. 1115 Mt. Vernon Ave., Philadelphia.

Especially American.

Dolls in Costume

Mrs. T. A. Lightfoot. 541 E. 78th St., N. Y.

All kinds made to order.

Films

- American Vitagraph Co. 116 Nassau St., N. Y.
Bureau of Commercial Economics. Washington, D. C. Educational and industrial films lent free of charge.
Thomas A. Edison, Inc. Orange, N. J.
Views of American Indians and foreign countries. Historic American cities.
Egan Film Co. Room 703, Columbia Theatre Building, 7th Ave. and 47th St., N. Y.
Plimpton Epic Pictures. 171 Madison Ave., N. Y.
General Film Co. 71 W. 23rd St., N. Y.
George Kleine. 166 No. State St., Chicago, Ill.
Travel, industrial, zoological.
Pathescope. 33 W. 42nd St., N. Y.
Industries.

Globes

- The Martin Celestial Globe & Tellurian Co. Loeb Bldg., Portland, Ore.
A. J. Nystrom & Co. 623 So. Wabash Ave., Chicago, Ill.
(May be obtained also from nearly all map-makers and other publishers.)

Hygiene Exhibits

- Educational Exhibition Co. 26 Custom House St., Providence, R. I. Public health, school and child hygiene.

Indian Articles

- American Indian League. 420 W. 20th St., N. Y.
Western Indians.
F. M. Gilham. Highland Springs, Lake Co., Calif.
S. W. Indians and prehistoric.
J. L. Hubbell. Ganado, Apache Co., Ariz.
Western Indians.
Indian Exhibits Co. 138 W. 42nd St., New York.

Francis Lester Co. Mesilla Park, N. M.

Western Indians.

Ye Olde Curiosity Shop. Seattle, Wash.

Eskimo and Northwest Coast.

Industries

Objects tipped to cards or in boxes, with labels, illustrating steps in the process of manufacturing from the raw material to finished product. Many of these are not well arranged from the teaching point of view, yet in the hands of skillful instructors can be used to good advantage.

Keasbey & Mattison Co. Ambler, Pa.

Asbestos. Samples of crude asbestos, carded fibre and finished product. Free to schools.

Royal Baking Powder Co. Royal Bldg., William and Fulton Sts., N. Y. Baking powder. Manufacture of cream of tartar. Free to schools teaching domestic science.

German-American Button Co. Rochester, N. Y.

Buttons. The process of manufacturing buttons out of vegetable ivory. 50 cents.

Hamburg Button Co. 251 N. J. R. R. Ave., Newark, N. J.

Buttons. Set showing steps in making buttons from shells. Small charge.

Carborundum Co. Niagara Falls, N. Y.

Carborundum. Samples of crude carborundum and the finished product. Free.

Atlas Portland Cement Co. 30 Broad St., New York.

Cement. Raw material, clinker and finished product. Free.

German American Portland Cement Works. 140 S. Dearborn St., Chicago, Ill. Cement. Steps in the manufacture of Portland Cement. Free.

Postum Cereal Co., Ltd. Battle Creek, Mich.

Cereals. 14 bottles showing process of manufacture from wheat, corn, rice and barley. Free.

Walter Baker & Co., Ltd. Milton, Mass.

Cocoa and chocolate. Free to schools.

Hershey Chocolate Co. Hershey, Penn.

Cocoa and chocolate. Free.

Huyler's. S. E. Cor. 18th St. and Irving Place, N. Y.

Cocoa and chocolate. Free.

C. F. Blanke Tea & Coffee Co. 7th and Clark Ave., St.

Louis, Mo. Coffee. From plantation to finished product,
\$3; freight collect.

Armstrong Cork Co. Pittsburgh, Pa.

Cork. Cork and cork specialties, \$1. Linoleum process
set, \$5.

Corn Products Refining Co. 17 Battery Place, N. Y.

Corn. 34 bottles, showing products and stages of manufac-
ture. Free to educational institutions. Express collect.

Spool Cotton Co. 315 Fourth Ave., N. Y.

Cotton. Making of cotton thread. Free.

E. J. Arnold & Son, Ltd. Leeds, England.

Dealers. Industrial process charts.

Commerce & Industry Co. 86 Gainsboro St., Boston.

Zoological and botanical cassettes for lantern use. Charts of
commercial products.

Cox & Co. 99 New Oxford St., London, England.

Dealer. Industrial process charts.

Scientific Supply Co. 1401 Central National Bank Bldg., St.

Louis, Mo. Dealer. Industrial charts, animal, vegetable
and mineral.

Swift & Co. Union Stock Yards, Chicago, Ill.

Fertilizers. By-products of the packing industry. Free.

Linen Thread Co. 96-98 Franklin St., N. Y.

Flax. Flax process, \$6; express collect.

Hecker-Jones-Jewell Milling Co. Produce Exchange, N. Y.

Flour. Furnished only to schools in New York State.

Pillsbury Flour Mills Co., Minneapolis, Minn.

Flour. Free; express collect. Weight, 18 lbs.

Washburn-Crosby Co. Minneapolis, Minn.

Flour. Free to schools and educational institutions.

Commissioner of Immigration. Winnipeg, Manitoba.

Grain. Samples of grain, grasses and threshed straw. Sent to schools.

Pike Manufacturing Co. Littleton, N. H.

Grinding stones. Raw material and finished product. Free.

Indiana Quarries Co. 112 Adams St., Chicago, Ill.

Limestone. Samples of Bedford limestone. Free.

Horlick's Malted Milk Co. Racine, Wis.

Malted milk. Exhibit shows wheat, flour, barley and barley malt. Free.

Chilean Nitrate Propaganda. 25 Madison Ave., N. Y.

Nitrate. Lantern slides lent.

Armour & Co. Chicago.

Packing industry. By-products of packing industry. Free.

Morris & Co. Chicago.

Packing industry. By-products. Free.

Sherwin-Williams Co. 601 Canal Road, N. W., Cleveland, O.

Paint and varnish. Raw material.

Eaton, Crane & Pike Co. Pittsfield, Mass.

Paper. Rag pulp process and photos. \$7.50.

Joseph Dixon Crucible Co. 501 Victoria Bldg., St. Louis, Mo.

Pencils. Free.

Eberhard Faber. 37 Greenpoint Ave., Brooklyn, N. Y.

Pencils. Free.

Esterbrook Steel Pen Mfg. Co. Camden, N. J.

Pens. From sheet steel to finished product. 10c.

Spencerian Pen Co. 349 Broadway, N. Y.

Pens. 25c.

German Kali Works. 1901 McCormick Bldg., Chicago, Ill.

Potash. Free to high schools teaching agriculture.

United States Rubber Co. Broadway and 58th St., N. Y.

Rubber. \$10.

Diamond Crystal Salt Co. St. Clair, Mich.

Salt. Free. Express collect.

Worcester Salt Co. 71-73 Murray St., N. Y.

Salt. Samples of salt. Free to schools.

J. Wiss & Sons' Co. Newark, N. J.

Shears. Free. Express collect.

Belding Bros. & Co. 201 W. Monroe St., Chicago.

Silk. \$1.25.

Cheney Bros. Fourth Ave. and 18th St., N. Y.

Silk. Cocoons, raw silk, thread, etc., on charts. Free.

Corticelli Silk Mills. Florence, Mass.

Silk. Box of 2 cocoons, 5c; silk culture charts, 20c; silk culture cabinet, \$1.25, to schools.

M. Heminway & Sons Silk Co. 890 Broadway, N. Y.

Silk. Process of manufacture. Free. Express collect.

T. A. Keleher. P. O. Box 3203 Sta. F, Washington, D. C.

Silk. Process set, 75c and \$1. Silk cocoon exhibit, 15c.

Larkin Co. Buffalo, N. Y.

Soap. Ingredients of soap. Free. Express collect.

Illinois Steel Co. South Chicago, Ill.

Steel. Raw and finished material. Free to educational institutions upon application of the principal. Express collect.

Minute Tapioca Co. Orange, Mass.

Tapioca. Samples of tapioca products on the market. Free to teachers.

C. F. Blanke Co. 7th and Clark Ave., St. Louis, Mo.

Tea. \$3.

International Harvester Co. of N. J., Agricultural Extension

Dept. Harvester Bldg., Chicago. Twine. Samples of sisal and manila fiber. 35c.

S. C. Johnson & Son. Racine, Wis.

Wood finishing. Small wood panels finished in different ways. Free.

Acme Veneer & Lumber Co. Cincinnati, Ohio.

Woods. Folder of veneer samples. 50c.

S. B. & B. W. Fleisher, Inc. Philadelphia.

Wool. Worsted yarn. \$1.

North Star Woolen Co. Minneapolis, Minn.

Wool. Steps in manufacture. 25c.

Berry Bros. Detroit, Mich.

Varnish. Fossil gums, etc., with samples of finished product.

Japanese objects and prints

Matsumoto Print Works. Nagoya, Japan.

Mogi, Momonoi & Co. 105 East 16th St., New York.

E. T. Shima. 20 East 33rd St., New York.

A. A. Vantine & Co. 438 Fifth Ave., New York.

Minerals

Foote Mineral Co. 107 N. 19th St., Philadelphia.

Sets and single specimens, meteorites.

Geography Supply Bureau. Ithaca, N. Y.

Systematic arrangement of sets.

Edwin E. Howell. 612 17th St., N. W., Washington, D. C.

Washington School Collections. Nos. 1, 2, 3.

Ward's Natural Science Establishment. Rochester, N. Y.

Systematic collections to order, meteorites.

Models

Dwight Franklin. 202 West 74th St., New York. Birds, animals, groups, etc. Beautiful, accurate and instructive.

F. Krantz. Bonn, Germany.

Ethnographic. Prehistoric man.

L. E. Knott Apparatus Co. 16 Harcourt St., Boston.

Geographic. Curtis Naturalistic Models. Set of six. \$50.

Philip Rauer. American Museum of Safety, 239 W. 39th St., N. Y. Ethnographic.

Motion Picture Apparatus

Thomas A. Edison, Inc. Orange, N. J.

Small machine for home and school use.

Kleine Optical Co. 166 N. State St., Chicago.

Pathescope. 33 W. 42d St., N. Y.

Small machine for home and school use.

Williams, Brown & Earle. 918 Chestnut St., Philadelphia.

Pottery

Charles F. Binns, Director N. Y. State School of Clay-working
and Ceramics. Alfred, N. Y. Process sets made to order.

Chicago Art Education Co. 218 S. Wabash Ave., Chicago.

Craftsman, Inc. Gustav Stickley. 6 E. 39th St., N. Y.

American pottery.

Mogi, Momonoi & Co. 105 E. 16th St., N. Y.

Japanese.

Moravian Pottery and Tile Works. Doylestown, Pa.

Tiles in styles of different countries and periods.

E. T. Shima. 20 E. 33rd St., N. Y.

Japanese.

John Wanamaker. Broadway and 10th St., N. Y.

American, Japanese and European.

Yamanaka & Co. 254 5th Ave., N. Y.

Japanese and Korean.

Projection Apparatus

Bausch & Lomb Optical Co. Rochester, N. Y.

McIntosh Stereopticon Co. Chicago.

Underwood & Underwood. 12 W. 37th St., N. Y.

Reflectoscope

Auto-projectoscope Co. 11 Broadway, N. Y.

Relief Maps

Central Scientific Co. Chicago.

Howells Microcosm. 612 17th St., N. W., Washington, D. C.

Maps and models to order.

A. J. Nystrom & Co. 623 So. Wabash Avenue, Chicago.

Maps and models for study of geography and geology.

AIDS IN HIGH SCHOOL TEACHING 193-63

Ward's Natural Science Establishment. Rochester, N. Y.
Maps and models made to order.

Science, Astronomy

J. L. Hammett Company. Bldg. No. 4, Bush Terminal.
Planisphere.

Science, Botany

Cambridge Botanical Supply Co. Waverly, Mass.

Katherine A. French. 419 W. 18th St., N. Y.

Wax flowers.

Kuy-Scheerer Co. 404-10 W. 27th St., N. Y.

Botanical models.

Antonio Mirando. Central Museum. Eastern Parkway, Brooklyn, N. Y. Wax flowers.

H. O. Mueller. Marlborough Road, Yonkers, N. Y.

Glass flowers.

Science, Entomology

American Entomological Co. 53 Stuyvesant Ave., Brooklyn, N. Y. Life histories of insects, protective coloration, etc.

New Jersey Entomological Co. 74 13th Ave., Newark, N. J.
Mounted life histories, protective coloration.

Science, Geology

Ward's Natural Science Establishment. Rochester, N. Y.

Shaler-Davis models illustrating physical geology and physiography. Sopwith geologic models, illustrating stratification, erosion and displacement.

Science, Ornithology

F. B. Webster. Hyde Park, Mass.

Mounted birds, eggs, nests.

Ward's Natural Science Establishment. Rochester, N. Y.

Mounted birds, eggs, nests.

Science, Zoology

Edwin E. Howell. 612 77th St., N. W., Washington, D. C.
Washington School Collection No. 4.

Kuy-Scheerer Co. 404-10 W. 27th St., N. Y.
Zoological models.

Ward's Natural Science Establishment. Rochester, N. Y.
Anatomical and zoological models, masks of the races.

Frank Blake Webster Co. Hyde Park, Mass.
Papier maché animal skulls.

Slides

In ordering of foreign slide makers, measurements of slides should be given as the standard foreign slide is square.

Audubon Society. 1974 Broadway, N. Y.

Birds, nests and eggs.

Charles Banks, Kirksville, Mo.

1500 slides illustrating the history of Oriental nations, Greece, Rome, Middle Ages, England and the United States.

Charles Beseler Co. 110 E. 23d St., N. Y.

Land and water forms. Europe and America. Biology. History.

Henry Blattner. 514 Washington Ave., St. Louis, Mo.

4000 views of history of architecture, especially ancient.

A. S. Burbank. Plymouth, Mass.

Views of historical Plymouth and portraits of the Pilgrim fathers.

Canadian Pacific R. R. 1231 Broadway, N. Y.

Lend slides of Western travel. Free.

Central Scientific Co. 345 W. Michigan St., Chicago.

General collection.

Chicago Transparency Co. 143 North Dearborn St., Chicago.

Travel, history, botany, anatomy, astronomy, bible, art, literature.

AIDS IN HIGH SCHOOL TEACHING 195-65

- H. P. Cook. 913 E. Main St., Richmond, Va.
Views of the south. The Civil War.
- Arthur S. Cooley. 139 Wall St., Bethlehem, Pa.
Grecian and Roman archaeological subjects.
- W. H. Dudley. University Library, Madison, Wisconsin.
American and ancient history.
- Educational Exhibition Co. 26 Custom House St., Providence,
R. I. Sanitation, child hygiene, tuberculosis and public
health.
- Erker Bros. Optical Co. 604 Olive St., St. Louis, Mo.
Geographical and historical slides of European countries.
Also American Indians.
- Flatters and Garnett, Ltd. 32 Dover St., Manchester, S. E.,
England. Biology, geology, astronomy, physiology, ma-
chinery, etc.
- Elmer L. Foote. Public Library, Cincinnati, O.
Early history of America especially Ohio and Kentucky;
also old masters.
- The Geography Bureau. Ithaca, N. Y.
Physical, industrial and commercial geography, meteorology,
climatology, minerals and rocks.
- Yoder-Heimann Co. 623 S. Wabash Ave., Chicago.
Historical subjects.
- Halliday Historic Photographic Co. 8 Beacon St., Boston.
History of New England.
- L. C. Handy. 494 Maryland Ave., S. W., Washington, D. C.
Maps and manuscripts in Library of Congress. Historical
slides of the Civil War.
- E. Hautecoeur. 35 Avenue de L'Opera, Paris.
Views of French historic buildings prepared by the Ministère
L'instruction publique et des Beaux-arts.
- Haynes Photo Studio. Selby and Virginia Aves., St. Paul, Minn.
Fauna, flora and formations of Yellowstone Park.
- Hellenic Society of London. London, England.
Greek life and history.

J. Holmes. 43 High St., Rochester, Kent, England.

Botany, zoology, geology and prehistoric anthropology.

Edwin E. Howell. 612 17th St., N. W., Washington, D. C.
Geographical slides.

International Harvester Co. of New Jersey, Agricultural Extension Dept. P. G. Holden, Director. Chicago. Sells and rents agricultural slides.

W. C. Ives. 200 E. 23d St., N. Y.

Glaciation, geology and physiography, classical art, architecture, archaeology of Europe and South America. Views of the far East and western American Indians.

Keystone View Co. Meadville, Pa.

Physical and commercial geography, history and civics, minerals, industries, geology.

K. F. Koehler. Taubscheuweg 21, Leipzig, Germany.

History of art and architecture and the development of writing and printing.

John Kennedy Lacock. 86 Buckingham St., Cambridge, Mass.
American history.

Ed. Liesegang. Volmerswerth Str., 21, Düsseldorf, Germany.
European history.

T. H. McAllister Company. 49 Nassau St., N. Y.

European and American History, means of transportation, commercial geography, science and architecture.

McIntosh Stereopticon Co. Chicago.

American views, history of civilization, American history, geology.

Mansell & Co. 271 Oxford St., W., London, England.
English history.

E. Mazo. 8 Boulevard Magenta, Paris, France.

Extensive sets illustrating European history.

Moore, Hubbell & Co. 713 Masonic Temple, Chicago.

Travel in Europe and near East. Views of Canada, U. S. and Philippines, art, agriculture and industries, astronomy, and views illustrating the operas and English literature.

AIDS IN HIGH SCHOOL TEACHING 197-67

- Newton & Co. 37 King St., Covent Garden, London, W. C.
Educational slides on many subjects.
- New York State Education Dept. Division of Visual Instruction. Albany, N. Y. Lends slides for history, biology and geography, commercial and physical and industrial, to residents of N. Y. State.
- H. F. Patton Manufacturing Co. 118 Noble Court, Cleveland, O. Slides of American history and geography.
- Pennsylvania State Museum. Harrisburg, Pa.
Lends slides of geography, ancient and European history, history of transportation and early Penn. history to persons in Pennsylvania.
- Philadelphia Commercial Museum. 34th and Spruce Sts., Philadelphia, Pa. Lends slides of commerce, industry, transportation, free to institutions in Pennsylvania.
- William H. Rau. 238 S. Carmac St., Philadelphia, Pa.
World travels, particularly U. S. history, ships and ship building, art and architecture, marine and biological, literature, industry, Bible.
- Records of the Past Exploration Society. 330 A Street, S. E., Washington, D. C. Archaeological subjects for Latin study; biblical history, prehistoric man, transportation and printing.
- Shredded Wheat Co. Niagara Falls, N. Y.
Lends slides of process, free.
- Strathmore Paper Co. Mitteneague, Mass.
Lends slides of process, free.
- Street Cleaning Department. Municipal Building, N. Y.
Slides on sanitation in connection with lecture.
- George R. Swain. 713 East University Ave., Ann Arbor, Mich.
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The University Co. 400 Newbury St., Boston.

Views of American historical subjects, chiefly Revolutionary War.

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Archaeological views of Greece and Sicily.

Ward's Natural Science Establishment. 84 College Ave., Rochester, N. Y. Microscopic slides on zoology, botany and physiology.

H. C. White Co. North Bennington, Vt.

World travel, commercial geography, manufactures and industries, in connection with religious customs and ceremonies, physiography.

Williams, Brown & Earle. 918 Chestnut St., Philadelphia, Pa. English, French, German and American history.

Wilson Brothers. Loch-head House, Aberdeen, Scotland. Scotch and British history.

E. G. Wood. 2 Queen St., Cheapside, London, E. C., England. English history.

York & Son. 67 Lancaster Road, Notting Hill, W., London, England. Views of recent wars arranged in lecture sets.

Modern American Library Economy As Illustrated by the Newark N. J. Free Public Library

By John Cotton Dana

The Picture Collection, Revised
Revised and Enlarged Edition
By J. C. Dana and Blanche Gardner

Published by
The Elm Tree Press Woodstock Vermont
1917

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Edited by John Cotton Dana

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INTRODUCTION.

The Picture Collection, which was Section 3 of Part 5 of Volume 1 of *Modern American Library Economy*, was first published in 1910, and has been out of print for several years. The collection of pictures in the Newark Library, which this pamphlet described, has greatly increased since 1910, in numbers and in use; experiments have led to changes in methods and materials, and the subject headings under which pictures are filed have been changed and added to. We have had many requests from libraries and other institutions for a complete list of these headings. Information has perhaps been more often asked for by librarians and others on our picture collection than on any other subject which has been covered in the pamphlets thus far issued in this series.

This statement is made to explain the publication of this revision of a part of Volume I.

I would again call attention to the method of presenting information followed in the pamphlets of this series. In Volume 1 are 627 pages. They contain about 225,000 words. They include nearly 2,000 definite statements, mathematical and other, which are exact, easily understood and, so far as being parts of directions or instructions, are capable of being put into effect by, and easily adapted to the conditions of, any working library. These statements are illustrated by nearly 200 photographs, diagrams and drawings.

The Introduction to the first pamphlet of this series said: "Were there an ideal public library, managed in an ideal way, with ideal assistants, furniture, blanks and general equipment, a detailed description of it would be of great value. As there is no ideal library, I have come to the conclusion, after considering the subject for a number of years, that a full description of the actual work of a large library would be very helpful to librarians and students of library economy; more helpful even than the description of an imaginary or composite one."

The responses received from librarians and specialists interested in the subjects covered by the several pamphlets, corroborate this opinion, and uphold the conclusion to which I long since arrived, that the loose method of general statement, very commonly used by writers and compilers who wish to describe the details of their business or profession, is not the proper one. This series does not contain the last word on any aspect of our calling; but we have spared no time or trouble in our efforts to make the statements they contain exact and clear. The labor cost of our efforts in this direction has been very great. The demand for precise details of library technique is very small, sentiment and generalities being apparently much preferred by most. This great labor cost and small demand explain the seemingly high price at which the several parts of the series are offered.

The picture collection as described in this pamphlet includes only a part and in some respects the less important part of the library's resources in the line of the graphic arts.

In the art department there is a large number, about 6,000, of such bound volumes of illustrations of every kind as are usually found in public libraries. These are of course called upon to supply demands which the picture collection proper cannot meet. Quite frequently plates are taken temporarily from large volumes and lent for home use. Many volumes of plates have, as already stated, been taken apart, and added either to the picture collection or to the collection quite distinctively for artists and designers, in the art department.

In the Print Collection, an entirely separate group, are 2,800 etchings, lithographs, photogravures, wood engravings, color prints, photographs, steel and copper engravings and examples of other processes, many of which may be lent.

The exhibit of the Features of a Printed Book contains about 800 pictures and samples illustrating 40 of the features of a printed book, mounted and labeled uniformly on 287 mounts. Many duplicate pictures and clippings are classified and filed

ready to add to and replace parts of this exhibit, and about 400 books are set apart to illustrate all aspects of book-making. Sets of mounts forming a similar exhibit have been sold to several libraries.

Connected with the art department also is the print collection named above; about 1,500 items are in the field of "Prints" properly so called, collected with the purpose of illustrating and explaining the history of prints and the methods and processes of producing them.

Imported lithographs. About 1,450 large colored lithographs on educational subjects are included in the lending collection of pictures. They have mainly been selected from the Bibliotheca Paedagogica, a German catalog of educational books, pictures and appliances. This is now superseded by a similar catalog called Schulwart. These lithographs vary in size and shape, 25" x 36" being perhaps an average size. They are well adapted for school use, as they may be easily seen across a class room. They cover subjects in biography, history, architecture, painting, sculpture, literature, geography, science, commerce, industry and nature study. They cost, unmounted, from 30 cents to \$1.50 each and may be ordered through any importer. See Decorative and Educational Pictures.

Japanese prints. Japanese prints are useful for design and for landscape studies. A few hundred inexpensive ones have been purchased in this country and Japan and are included in the picture collection. The finer ones are in the print collection. Both cheap and expensive prints can be bought of Bunkio Matsuki, Boston, Mass., dealer in Japanese art objects, or of Matsumoto-Do, 1 Yuraku-Chu, Tokyo, Japan.

Wall Pictures Lent

Fine prints and photogravures and Medici prints, matted, 22" x 30", in Hurlock board, are lent from the print collection to borrowers who are willing to buy, for \$1.60, a frame with glass in the standard size. These frames are specially made for

this purpose and are so constructed that the prints in them are easily changed, the backboard being removable. The prints are lent to borrowers who have frames, in a large craft paper envelope with heavy pulp board placed over the face of the picture for protection. They are lent for periods of one, two or three months, as specified at the time borrowed, and are charged in the same manner as small pictures. High school teachers of English, French, German and Music have found it very useful to hang these copies of paintings of the old masters on their school-room walls. Under proper conditions these finer prints, especially the photographs, are lent singly or in quantities, without frames.

The prices of paper given in this pamphlet are those for which we bought paper before prices rose after the beginning of the war. These will probably return in time to about their original level.

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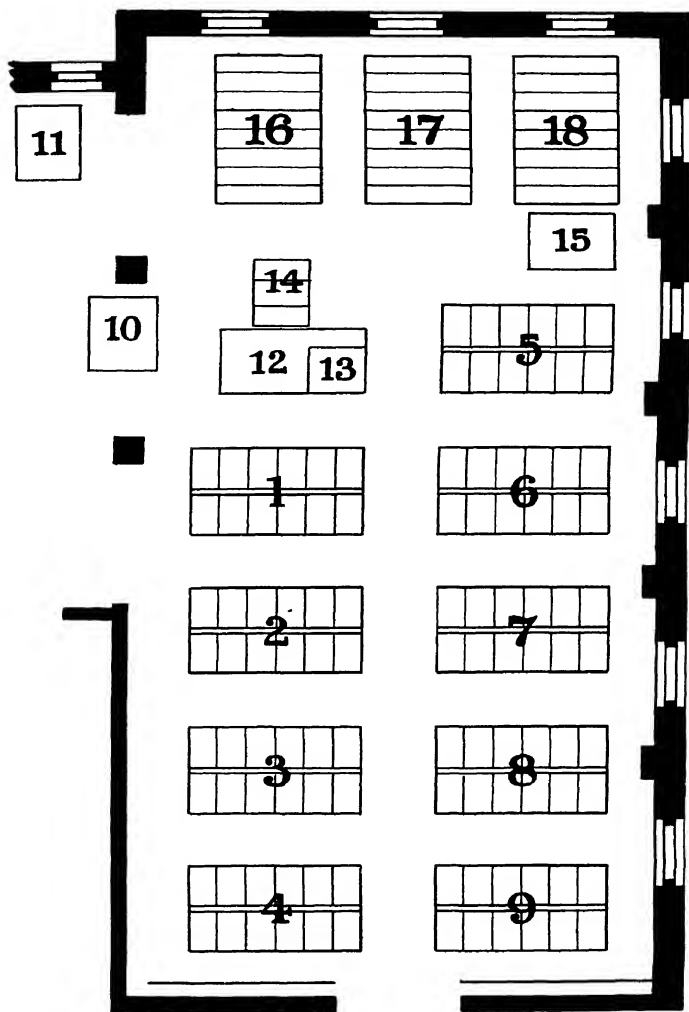


Fig. 1. Floor plan of Picture Collection Dept. 24' x 50', at one end of Art Room. See Working Plan of Room.
 No. 1 to 9. Double bases containing boxes as indicated.
 10. Charging desk.
 11. Desk of assistant in charge.
 12. Work table.
 13. Guillotine cutter on same.
 14. Mounting table with mounting tray thereon.
 15. Display table.
 16, 17, 18. Racks for lithographs, not here described.

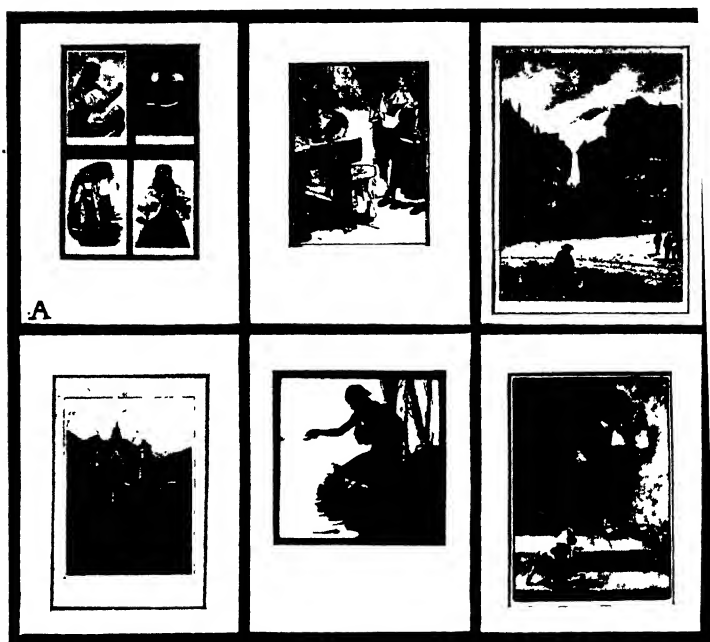


Fig. 2. Miscellaneous assortment of pictures suited for bulletin use. (A) Arrangement of Szalatnay postcards illustrating Bohemian costume; used in "Homelands" exhibit in which were shown objects illustrating native customs of foreigners of Newark.

The Picture Collection

The picture collection occupies part of a room on the third floor of the library, filling an area 24' x 50' 10".

The floor plan, Fig. 1, shows the arrangement of this part of the room, and its relations to the art department and to the hall.

The pictures have been accumulating for 14 years and now number about 400,000, including a great variety of sizes and kinds of prints. More than 50,000 are mounted, all in uniform style, on mounts of the same size. See under Mounts for Pictures.

How Pictures are Obtained

The main sources from which pictures have been gathered are these:

Pictures from Magazines. The collection is enriched each year by illustrations from hundreds of magazines which are bought at second hand, and from those which are purchased for the library reading room, but are not needed for the bound files. Some of the magazines that have contributed to this collection are:

Bulletin of the Pan-American Union	Harper's Weekly
Burr McIntosh Monthly	House and Garden
Century	House Beautiful
Collier's Weekly	L' Illustration
Cosmopolitan	Illustrierte Zeitung
Country Calendar	Interior Decoration
Country Gentleman	International Studio
Country Life in America	Jugend
Garden Magazine	Keith's Magazine
Harper's Magazine	Keramic Studio
	Kunst

Ladies' Home Journal	Perry Magazine
Leslie's Weekly	Review of Reviews
London Graphic	St. Nicholas
London Illustrated News	Saturday Evening Post
London Sketch	Scientific American
London Sphere	Scribner's
McClure's	Suburban Life
Mentor	Theatre
Moderne Stil	Town and Country
National Geographic Magazine	Travel Magazine
Munsey	Ueber Land und Meer
Outing	World's Work
Outlook	

Pictures from Books. Illustrations have been taken out of many books to enlarge the picture collection. Some of the books were discards from the library, set aside because too much soiled to be used longer as books; some were books deliberately taken apart, though still sound, because they were manifestly more useful when thus treated; some were gifts which were either incomplete or were duplicates of those already in the library; some were bought new or second-hand for the express purpose of adding their illustrations to the collection. Expensive volumes of plates are often taken apart and used in this collection. See under Plates and Pictures in Sets, etc., How filed.

A few of the many volumes which have contributed material to this department are:

Allegorien und Embleme. Gerlach
 America, her Grandeur and her Beauty
 American Gallery of Art
 Animal Kingdom, Living Pictures of the
 Art and Artists of our Time
 Bibel in der Kunst
 Bible, Harper's Illuminating and New Pictorial

Biographical History of England (portraits). Granger
Bronzes d'Appliques. Hessling
Christ and the Apostles
Christmas Carol (illuminated)
Civil Costumes in England from the Conquest to the Regency
(Le) Costume Historique. Racinet
England, History of
Examples of Chinese Ornament. Jones
Famous Paintings of the World
Forest, Fish and Game Commission of the State of New York.
Reports
Four and Twenty Toilers. Lucas
Grammar of Ornament. Jones
Heroines of Shakespeare
History of the Crusades. Michaud
Hundred Best Pictures. Letts
Illustrated Exercises in Design. Branch
Indian Scenes and Characters
Ireland in Pictures. Hyland
Jeanne d'Arc. Boutet de Monvel
Lasst Licht Hinein. Larsson
Living Races of Mankind. H. N. Hutchinson.
Mansions of England in the Olden Time. Nash.
One Hundred Crowned Masterpieces
L'Ornament Polychrome. Racinet
L'Ornementation des Manuscrits au Moyen Age. Guillot
Our Islands and their People. Olivares
People's Standard History of the United States
Pictorial Field Book of the Revolution. Lossing
Picturesque America. W. C. Bryant
Players of the Day
Portrait Gallery of Eminent Men and Women
Portraits of American Authors. J. C. Clay
Queen's London. Cassell
Shepp's Photographs of the World

Stoddard's Art Series:

Glimpses of the World

Sunny Lands of the Eastern Continent

Tour through Northern Europe

Venice of Today. F. Hopkinson Smith

Volkerschmuck. Gerlach

Washington, a Biography. B. J. Lossing

World's Fair, the Magic City

Zur Geschichte der Kostume. Braun u. Schneider.

Pictures from Publishers of Pictures.—The publishers here listed are those from whom more important groups of pictures have been obtained.

American Architect, 50 Union Square, N. Y. Sets of 15 to 100 plates from back numbers. Price, 60c to \$4 a set. Classified list of subjects issued.

Art Institute of Chicago. Series of color prints of well-known paintings, with lives of artists, 14" x 11". 17 subjects issued, 25c each. Price list of other reproductions, photographs, post-cards, etc., issued by Art Institute.

Atkinson, Mentzer & Co., 24 W. 39th St., N. Y. Children of the Nations, Japanese Children and Sunbonnet Baby Color Cards. Size, 5" x 7". 15c a dozen.

Boston Museum of Fine Arts, Boston. Sepia reproductions of paintings and objects in museum; Egyptian, Assyrian, Greek and Roman art, 8" x 10". Price, 40c.

Brown, George P. & Co., 38 Lovett St., Boston. Subjects, sizes and prices similar to Perry Pictures. Illus. catalog.

Busse, George, 20 E. 48th St., N. Y. Imports pictures for schools and libraries, free of duty. Carries in stock large assortment of German lithographs, including full collection of Seemann publications.

The University Prints, Newton, Mass. Black and white prints, 8" x 5½". Sets of 500 for \$4. Subjects include Greek, Roman

and Egyptian sculpture, Dutch, Flemish, German, French, English and Italian art, and European architecture with handbooks; also Manual for the Use of Pictures in the Teaching of English, Latin and Greek, 25c.

Cosmos Pictures Co., 119 W. 25th St., N. Y. Subjects similar to Brown and Perry Pictures. Black and white, with slight green tint, printed on rough surfaced paper. Regular size, 6" x 8 $\frac{5}{8}$ ". Other sizes, 9" x 15" and 10" x 13". Prices, 2c to 5c each. Illus. catalog.

Crombie, Charles. Rules of Golf. London, Perrier. 24 plates, 12" x 10", \$2.

Dekorative Vorbilder. German continuation issued irregularly; subscription price, \$3 for 12 nos. Four or five plates, 9 $\frac{3}{4}$ " x 13 $\frac{3}{4}$ ", with each issue. Great variety of subjects covered; design of all kinds, friezes, landscapes, marines, stained glass, posters and symbolic pictures.

Eggiman, Ch. Paris. Introd. Maxime Collignon. Parthenon. 1910-1911. Eight parts. Over 100 fine plates of the interior, exterior and the friezes, 12" x 20". Price, per part, \$4.

Gerbel, A., 133 W. 13th St., N. Y. Imports pictures for schools and libraries, free of duty. Carries large assortment of samples.

Hart Schaffner and Marx, 36 So. Franklin St., Chicago. Issues as advertisements very attractive views of American cities and American history. Size, 10 $\frac{1}{2}$ " x 10 $\frac{1}{2}$ ". Given away by firm.

Harvey, Fred. Great Southwest along the Santa Fé. Numerous plates, 10 $\frac{1}{2}$ " x 7 $\frac{1}{2}$ ", \$1.

Hoppe, Feodor. Mythologie und Geschichte der Griechen und Romer. Carl Graeser, Vienna. 30 plates, including portrait bust of Homer, 12 $\frac{1}{2}$ " x 16 $\frac{1}{2}$ ". \$5 for set in portfolio.

Huyler's, 18th & Irving Sts., N. Y. Set illustrating growth of the cocoa tree and preparation of cocoa. Black and white, 16" x 14", free.

Justi, C., ed. *Die Geschichte der Kunst*. Munich, Holbein. 1. Noack. *Baukunst des Altertum*. 2. Knapp. *Italienische Plastik v. 15-18 Jahrhundert*; Loga. *Spanische Plastik v. 15-18 Jahrhundert*. 3. Justi. *Italienische Malerei d. 15 Jahrhunderts*. Half tones, 9" x 12", black and white, \$4.50 for each part. May be bought of G. E. Stechert & Co.

Karlson, C. E. *Elementary basketry*. Springfield, Mass., Milton Bradley Co. 12 plates, black and white, 14" x 11". 75c. Lebesque, Octave. *Napoleon Bonaparte*. Illus. Jaques Onfroy de Breville. (Text in French). 30 full page and four double page plates. 10½" x 14" and 14" x 21". Very fine. To be bought occasionally second hand for \$5 or \$6.

Longmans' *Historical Illustrations*. Plates of English history from 11th to 16th century. Black and white, 12" x 9½". Six portfolios of 12 plates each. 90c for each portfolio.

Masters in Art. Boston, Bates & Guild. Illustrated monographs, each devoted to one painter. 110 parts issued in paper binding and in boards. 25c each part. Descriptive leaflet.

Matsumoto Print Works, Nagoya, Japan. Japanese color prints, reproductions and originals, large and small, decorated towels, stencils, etc. Prices for prints, 10c up. Can be sent to any post office in United States by parcel post. Article and postage payable with order. Duty payable at post office when received. Allow three months for filling orders in the United States. Lists issued.

The Mentor, 52 E. 19th St., N. Y. Issued bi-monthly. Six loose plates, in sepia or colors, with each number. 107 numbers issued to date. Great variety of subjects. \$3 a year; 15c single number.

Mumford, A. W., 536 South Clark St., Chicago. Publishes bird and nature pictures in colors. a. Subjects include animals, plants and flowers, insects, fish, marine life, fruit and minerals. Size, 7" x 9". Price, 2c each or \$1.80 per 100. Special prices for large quantities. List of 648 subjects issued.

b. Special set of three series of forest trees in photogravure, 9" x 12". 40c for each series of eight pictures, or \$1 for complete series.

New York State. Commissioners of Fisheries, Game and Forests Report. Excellent black and white plates of forests and mountain scenery and color plates of fish, birds and insects. To be bought second hand.

Perleberg, H. C., Co., 376 Central Ave., Jersey City, N. J. Art in Advertising. 50 photographic plates, 7 $\frac{3}{4}$ " x 9 $\frac{3}{4}$ ". Several subjects for advertising and poster work on each plate. Price, \$9.90. May be ordered direct from publisher.

Fragments. 42 photographic plates, 9 $\frac{3}{4}$ " x 11 $\frac{3}{4}$ ". Subjects for illustration and poster work on each plate. Price, \$9.90. May be ordered direct from publisher.

Perry Pictures Co., Malden, Mass. Black and white pictures of paintings, sculptures, famous buildings, historical subjects, etc. Colored pictures of birds, animals, insects, etc. 3" x 3 $\frac{1}{2}$ " to 10" x 12", 1c to 8c each. Illus. catalog.

Philadelphia Ledger. Colored supplement pictures of the William Penn Colony mural paintings, by Violet Oakley, in the Capitol at Harrisburg, Pa.

Reid, Frederick W. Designs in leather, with working patterns. Milton Bradley Co., Springfield, Mass. 19 plates with descriptive text, 9" x 12", 75c.

Seeman's Katalog der farbigen Kunstblätter. Colored half-tone reproductions of old masters and of modern artists. Average size, 9" x 7"; price, 20c to 25c.

Speltz, Alexander. Das Farbige Ornament aller historischen Stile. Baumgartner, Leipsic. Six parts issued, consisting of five colored plates, 11" x 15", descriptive text in German. Historic ornament of all ancient countries. \$1.35 each part. May be ordered from Gerbel.

Stechert, G. E. & Co., 151 W. 25th St., N. Y. Imports pictures to schools and libraries, free of duty.

Szalatnay, R. D., 542 E. 79th St., N. Y. Slovak and Bohemian costume plates. 11½" x 8½", 60c; Bohemian history. 7 plates, 15" x 11½", 60c each.

Thompson Publishing Co., Syracuse, N. Y. These prints are not uniformly good, but the subjects are of value. Blue prints, 4" x 5", 1c each; 8" x 10", 10c each. Includes sculpture, painting, history, industries and a good collection for the study of English literature. Catalog 15c.

Ward, Artemas, 50 Union Square, N. Y. 80 color plates from the Encyclopedia of Foods and Beverages. Size, 8" x 11". Includes plates showing cuts of meat. Unmounted, \$2.50 a set. Mounted on heavy cards, \$4. \$2.50 for any selection of 40.

Pictures from Publishers of Postcards.—Augener Ltd., 63 Conduit St., London, W. Nursery rhymes. Illus. by H. Willebeek LeMair. 12 in set, 25c.

Bell, G. & Sons, York House, Portugal St., London. W. C. Bell's Latin Picture Cards. Two sets issued include poets and prose writers. Complete set of 16 cards, 32c.

British Museum, London. Large selection of platinum postcard views of Museum collections. May be ordered from Stechert. Two for 5c.

Callwey, George D. W., Munich. Konewka Allerhand Kinder. 12 silhouette cards, 25c.

Cartwright, R. S., 8 Johnson Court, Fleet St., London, W. C. Six cards of incidents in life of Dr. Johnson. 15c for the set. Chicago. Art Institute of Chicago. Postcards in sepia and colors, 1c each. Includes painting, sculpture and views of the building.

City History Club, 23 W. 44th St., N. Y. Views of Old New York.

Comite, 93 Overtoom, Amsterdam. Dessins d'un Neutre. Cartoons of European War by Raemaekers. 21 subjects, 50c.

Detroit Publishing Co., Detroit, Mich. N. Y. address, 15 W. 38th St. Phostint Journeys. Views of the United States; clear pictures and well colored. 40 in a carton, \$1. Descriptive leaflet.

Dietrich & Co., Brussels. Views of Holland. Illus. by H. Cassiers. 12 subjects, 50c.

Drama League of America, 1145 Marquette Building, Chicago. Two sets of postcards, one in color, showing scenes from Shakespeare's plays. Ten subjects in set. 5c each card.

Eau Claire, Wis. Public Library. 24 photographic postcards of lumbering scenes in the West. Price of set, \$1.75.

Haynes Photo Co., Selby Ave., St. Paul, Minn. Yellowstone National Park. 50 assorted cards, 50c. Postage extra.

Larby, E. J., 1 Paternoster Ave., London, E. C. London at twilight. Illus. by Thomas R. Way. 12 pastel cards, 25c.

Little Craft Shop, Hartford, Conn. Sells for an Italian firm, postcards, in color, of the old masterpieces; 10c each.

Metropolitan Museum of Art, N. Y. Postcards of antiquities, painting, sculpture, etc., in the museum, 5c each. List issued. L'Oeuvre du Vetement des Soldats Belges. The Sackville Gallery, 28 Sackville St., London, W. 6 European War postcards by eminent Belgian artists. 22c.

Reinthal and Newman, 106 W. 29th St., N. Y. Reproductions of works of art, Musee series of old masters and pictures by Jessie Wilcox Smith and other American artists, 5c each.

Rommel, Martin & Co., Hofkunstaustadt, Stuttgart. Flower postcards in true colors.

Szalatnay, R. D., 542 E. 79th St., N. Y. Bohemian and Hungarian costume, manners and customs. 100 subjects for \$5 (Fig. 2A).

Ye Olde Cheshire Cheese, 145 Fleet St., London. Six sepia postcards, 25c.

Pictures from Other Sources. Booklets: Railroad circulars—Cuba R. R., United Railways of Havana, Prado 61 Havana,

Cuba, and The Cuba Railroad Co., 52 William St., N. Y.; Yellowstone Park, Northern Pacific Railway. White Pine Series, a series of monographs for architects, R. F. Whitehead, 132 Madison Ave., N. Y. Atlantic Terra Cotta Co., 1170 Broadway, N. Y. Sherwin-Williams Paint Co., Cleveland, Ohio, etc. Calendars.

Catalogs: Art sales; book publishers.

Advance announcements and sample pages of books, book wrappers and advertising posters from publishers.

Photographs secured on request from daily papers after publication.

Regular continuations: Dekorative Vorbilder; jewelry plates cut from magazines and books of jewelry design.

Loose supplements to magazines: Illustrated London News; L'Illustration; Ceramic Studio; Mentor; Musical America, etc.

Picture supplements of Sunday newspapers.

Pictures from Firms which Advertise with Pictures. The following firms, in addition to several book publishers, have supplied us with samples of advertising posters, poster stamps, etc.:

Advertising Seals Co., 1265-1269 Broadway, N. Y. C.

American Bank Note Co., 70 Broad St., N. Y. C.

American Book Co., 100 Washington Square, N. Y. C.

American Colortype Co., 225 Fifth Ave., N. Y. C.

American Lead Pencil Co., 220 Fifth Ave., N. Y. C.

American Lithographic Co., 4th Ave. & 19th St., N. Y. C.

American Optical Co., Southbridge, Mass.

American Poster Stamp Co., 124 Government Pl., Cincinnati, O.

Arlington Co., 725-727 Broadway, N. Y. C.

Atlantic Communication Co., 47 West St., N. Y. C.

Ballantine & Sons, 58 Freeman St., Newark, N. J.

Bauer Chemical Co., 30 Irving Pl., N. Y. C.

Bayer-Stroud Corporation, 5th Ave. Bldg., N. Y. C. (Lithographers)

Bittner, Franklin, 14 W. 29th St., N. Y. C. (Publishers of stamps)

- Bowring & Co., Passenger Dept., 17 Battery Pl., N. Y. C.
Brentano, 5th Ave. & 26th St., N. Y. C.
Brill Bros., 279 Broadway, N. Y. C.
Browning, King & Co., 16 Cooper Square, N. Y. C.
Canadian Pacific Railway, 458 Broadway, N. Y. C.
Canadian Picture Stamp Co., 336 Booth Bldg., Ottawa, Canada
Carlton Studio, Flatiron Bldg., N. Y. C.
Chicle Products Co., Newark, N. J.
Conrad & Co., Winter St., Boston, Mass.
Consolidated Safety Pin Co., Bloomfield, N. J.
Cook & Sons, 245 Broadway, N. Y. C.
Crofut & Knapp Co., 251 5th Ave., N. Y. C.
Dyer Company, 42 Broadway, N. Y. C.
Evinrude Motor Co., Milwaukee, Wis.
Farmer-Zehr Engraving Co., N. Y. C.
Fiberloid Co., 55 Fifth Ave., N. Y. C.
Hinds, A. S. & Co., Portland, Me.
Kenfield-Leach Co., 445,447 Plymouth Court, Chicago.
Kleinert Co., 725 Broadway, N. Y. C.
Lehigh Valley R. R., 211 Market St., Newark, N. J.
Leshner, Whitman & Co., Inc., 670 Broadway, N. Y. C.
Leslie-Judge Co., 225 5th Ave., N. Y. C.
Levin & Bradt, 1269 Broadway, N. Y. C.
Little, Brown & Co., 34 Beacon St., Boston.
Lord & Taylor, 153 E. 24th St., N. Y. C.
Lovell-McConnell Mfg. Co., 190-218 Wright St., Newark, N. J.
McFadden, H. J. & Co., 38 Warren St., N. Y. C.
Mayer & Lowenstein, 164 Water St., N. Y. C.
Monmouth Beach Land Co., Woolworth Bldg., N. Y. C.
Monopole Champagne Importation Co., 80 Maiden Lane, N. Y. C.
Monro & Harford Co., 416 W. 33d St., N. Y. C. (Publishers of stamps)
Mutual Film Co., 71 W. 23d St., N. Y. C.
National Lead Co., 111 Broadway, N. Y. C.

N. Y. & Porto Rico S. S. Co., 11 Broadway, N. Y. C.
N. Y. Edison Co., Irving Pl. & 15th St., N. Y. C.
North German Lloyd, 5 Broadway, N. Y. C.
Philatelic West, Superior, Nebraska.
Picture Poster Publicity Co., 345 5th Ave., N. Y. C.
Plymouth Cordage Co., North Plymouth, Mass.
Postal Life Insurance Co., 35 Nassau St., N. Y. C.
Powell's Chocolate Mills, 416 Canal St., N. Y. C.
Publisher's Printing Co., 207 W. 25th St., N. Y. C.
Remington Arms Union Metallic Cartridge Co., 299 Broadway.
Rickard & Sloan, 20 Vesey St., N. Y. C.
Rogers & Co., 9 Murray st., N. Y. C.
Shepard Stores, Boston, Mass.
Southern Railway Co., 264 5th Ave., N. Y. C.
Spalding & Bros., 126 Nassau St., N. Y. C.
Valentine & Co., 456 4th Ave., N. Y. C.
Wells & Co., 2501 South Dearborn St., Chicago.
Wentz & Co., 23 E. 26th St., N. Y. C.
Wolber, C. & Co., 259 Plane St., Newark, N. J.

Pictures on Specific Subjects

Suggestions for material available on certain subjects much in demand

A selected list of picture material which can be mounted on cards, 13" x 17½", is here given, with sources. In some cases the sets can be filed together under one general head. Sizes given include picture margins. All pictures are in color unless otherwise indicated. Books to be cut up may be ordered from the publishers mentioned, from art book dealers listed or from any large book publisher.

Postcards, because of their size, have not been mounted to any extent on standard 13" x 17½" mounts. They are occasionally lent unmounted for reflectoscope use and are specially mounted for bulletin and exhibition purposes, Fig. 2 A. The list of them is not complete, but suggests some of the useful sets.

Animals: Neue Tierbilder. Stuttgart, F. Carl. 12 plates, 11" x 8½", 50c (bk.).

Familiar Animals, series C, 12 plates, 9" x 6½"; Farm life series, 12 plates, 9¾" x 12". N. Y., Gabriel. 35c a set.

Wild Animals of North America. Knobel. N. Y., Authors' & Newspapers Assoc. Black and white plates, 13" x 10½". (bk.).

Etudes d' Animaux. Mélieut. Paris, Librairie Centrale des Beaux Arts. 100 plates, black and white, 13" x 17", \$6.00 (bk.).

Das Thierleben in Schönbrunn. Leipsic, Gerlach. 61 plates, black and white, 11½" x 10". \$12 (bk.). See also A. W. Mumford's Pictures and Perry Pictures Co.

Bible: Tissot Picture Society, 37 Montgomery St., Jersey City, N. J. Old and New Testament Bible pictures, 5" x 6", 1c each. 100 for \$1. Illus. catalog.

Birds: Beard Birds. N. Y., Stokes. Life-size cut-outs on heavy board, 11" x 10". 12 subjects, \$1.

Birds for School and Home. Wright. Springfield, Mass., Milton Bradley Co. Cut-outs on heavy board, 8½" x 11". 40 plates, black and white, 4 folios. 25c a folio.

Bird Portraits. Horsfall. N. Y., McClure, Phillips Co. 8 plates, 14" x 11", 25c each. See also A. W. Mumford's Pictures, Perry Pictures Co., and publications of National Audubon Societies, N. Y. State Museum and Commissioners of Fisheries, Game and Forests.

Cities: Lithographs of old German Cities. Cassel, Victor. 10 plates of each subject, 12" x 16½", in folio, \$1.50.

Drawing: Drawing and Constructive Work for Schools. Frank H. Collins. Plates, 10" x 13", black and white and in colors. 1st series, 75c; 2d series, 29c; 3d series, 50c.

Progressive Drawing Books. N. Y., Prang. 8 in series. Black and white plates with descriptive text, 8" x 10", \$1.50.

Applied Arts Drawing Books. Seegmiller. N. Y., Atkinson Mentzer & Grover. Grades 1-4, 8 parts each 10c; 5-8, 8 parts each 15c.

Pencil Sketching-Antique Buildings. Jacobs. N. Y., Scott Foresman. 12 plates, 11" x 14", 75c.

Pencil Sketches of Trees. Warner. N. Y., Scott Foresman. 12 plates, 11" x 14", 50c.

Pencil Sketches of Trees. Woodbury. Springfield, Mass., Milton Bradley Co. Plates 9" x 12".

Darrah's Object Drawing. Worcester, Mass., Davis Press. Plates, 8½" x 10½" .

Good Zoo Drawing Cards. Cleveland. 3 sets, 10 cards each. 6" x 8½", 25c a set; Appearance Test Cards, 7" x 10", 5c each; Appearance Test Sheets, 9" x 12", 8 in packet, 40c. Boston, School Arts Pub. Co.

Fairy tales—Nursery rhymes: Mother Goose. Smith. Cosmopolitan, Print Department, 119 W. 40th St., N. Y. 6 subjects, \$1.25; 12 subjects, \$2.50; 18 subjects, \$3.75, 14" x 12".

Walter Crane Picture Books. N. Y., John Lane Co., 27 books of fairy tales. 9" x 10", 25c each.

Fairy Land, series B. 12 plates, 6½" x 9½". 15c each. N. Y., Gabriel.

Hans im Glück. Das Deutsche Bilderbuch No. 9. Mainz, Scholz. 8 plates, 12" x 9", 60c (bk.).

Willy Pogany Picture Books. N. Y., Holt. Robinson Crusoe, Hiawatha, Children at the Pole and various fairy tales. 8 subjects in a set, 5" x 5", 15c each. (bk.)

Palmer Co., 120 Boylston St., Boston. Hiawatha Pictures. 30 subjects, black and white, 12" x 10", \$2.

Flowers, Design—Naturalistic: Common Flowers. 12 subjects, 5½" x 5½", 25c a set; Brush drawing cards. Nicol. 3 sets, 20 cards in set, 7½" x 5½", 35c a set. London, Blackie.

Floral Elements. Arthur Scribner, 10 Pearl St., Lawrence, Mass. Black and white plates, 7" x 10".

Nature's Aid to Design. N. Y., Lane. 85 plates, black and white, 8¼" x 11¾", \$2.

Decorative Flower Studies. Foord. London, Batsford. 2v. 80 plates, 10½" x 15". \$7 to \$10 a part. See also Hart Schaffner & Marx posters; Dekorative Vorbilder plates; Ceramic Studio, loose supplement; Japanese prints; Flower catalogs; A. W. Mumford's Pictures; Perry Picture Co.

Jewelry: Charles Reis, 149 W. 35th St., N. Y. Diamond and platinum jewelry designs, 8½" x 13". Two or three plates each month. Year's subscription, \$8.

Lettering: Alphabet of Roman Capitals, taken from Trajan's Column. London, Batsford. Size of plates, 7½" x 11½". Price, about \$6.50.

Guild Alphabet Folio. Capitals, small letters and figures. Monastic text. Roman text. Decorative initials. New York, Atkinson, Mentzer & Co. 25 sheets in a packet, 30c.

Manuscript and Inscription Letters. Johnston. London, John Hogg. 16 plates, 10" x 12", 88c.

Designs of Monograms, Inscriptions and Alphabets, for Jewelry Work. Hornikel. Phila., Keystone Pub. Co. 73 plates, black and white, 12½" x 9½", \$6.

Wheat: How it is made into bread. Munich, Dietrich. 12 plates, 12" x 9", 80c. (bk.)

Bulletins

We do not make picture bulletins. In our experience they seemed a futile attempt to elevate the scrap-book to uses for which it is not fitted. They are not beautiful, though they are sometimes pretty. Their compilation takes much time. The elaborate lettering on them usually speaks more of the pains incident to making them than of the skill and taste devoted to them.

A group of pictures on any given subject, taken out of the

collection and displayed on screens, thereby becomes a bulletin on that subject. To this extent and in this way our collection is daily forming bulletins, which are daily expanding, changing and improving.

Such groups of pictures, from four to 24 in number, are selected at the end of each month and on special occasions to hang on screens in certain departments and branches of the library, Figs. 2, 3 and 4. In making these selections, special and new sets are used and pictures of good size or attractively colored; other points considered are whether they are to be seen by children or adults, at close range or in a branch window by passersby. A one-line printed sign, the width of the picture mount and about 3" high, placed just over the first picture in a group is often used to label an exhibit. Again, a printed poster of standard size, descriptive of the collection and its uses, Figs. 5, 6, 7 and 8, is hung at the beginning of the bulletin. These posters are used in many ways for advertising purposes.

Dennison card holders, No. 24, are used to hang the pictures, two at the top, $\frac{3}{4}$ " from either corner; if necessary, two more are used on the lower corners, at either side, to insure flat and safe hanging of the mount. See also under Handling and Display of Pictures.

A record of pictures sent out each month for bulletin use is kept in a notebook for statistics and to avoid repeating the same subjects. Neatness in mounting and straight lines in hanging are requisites of such an exhibit.

Exhibits

For many years picture material for exhibition purposes has been lent by the Newark library to libraries, clubs, schools, colleges, lecturers and associations of all kinds in all parts of the country. The borrower assumes only the cost of transportation both ways, and, in case of large exhibits requiring much time and care to assemble, the cost of preparation and packing. A strong box is built for packing the exhibits and the following directions are enclosed with the material:

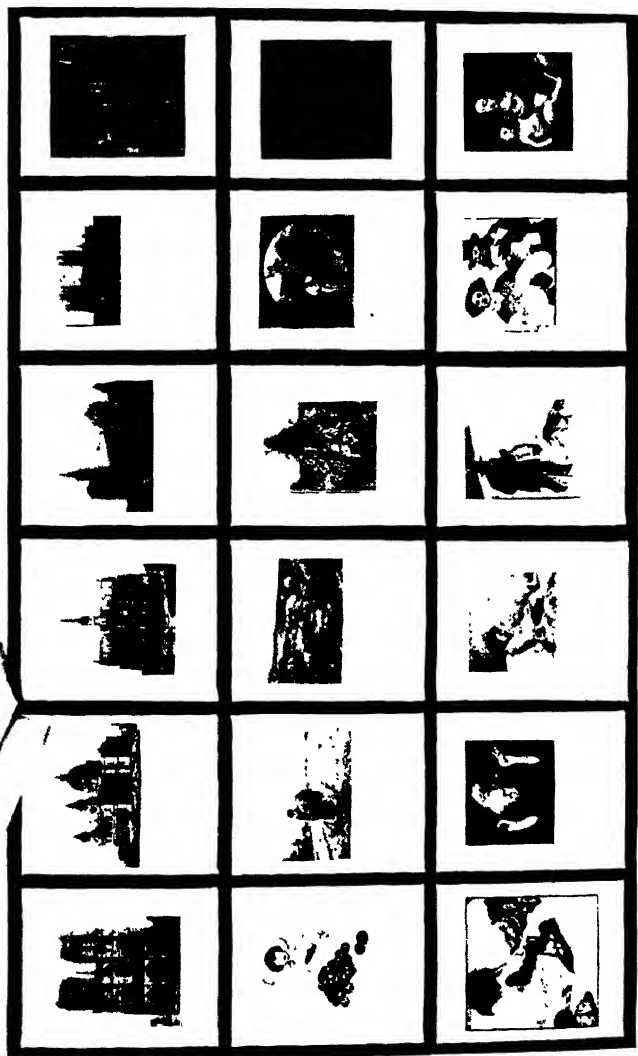


Fig. 3. Six sheets or mounts out of a set or exhibit of each of three kinds. Top row, Cathedrals; middle row, Harvest; lower row, Christmas.

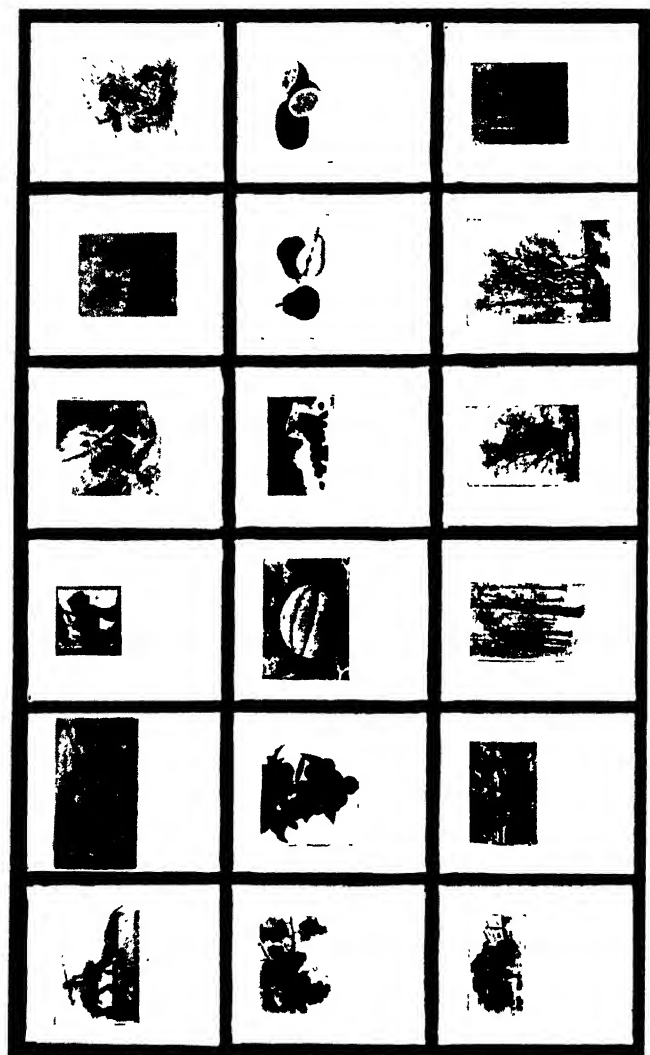


Fig. 4. Six sheets or mounts out of a set or exhibit of each of three kinds. Top row, Chivalry; middle row, Fruits; lower row, Trees.

PICTURE COLLECTION

For all Purposes

Mounted on cards this size; which stand on end in open boxes, easily looked over; you select and borrow all you need. They are in alphabetic order of subjects; some are grouped, as: 50 on "Johnson and His Times"; "Homes and Haunts of Shakespeare"; "Homer's Odyssey"; "Days of Queen Anne". They also cover Design, all kinds; Birds; Flowers; History and Travel, all countries; Portraits; Architecture; Sculpture; Painting; etc., etc.

The Free Public Library of Newark, N. J.

Fig. 5. Poster shown with exhibits, or posted in library, schools, churches, etc. Printed, 13" x 17½".

Directions for Packing

1. Note in unpacking how material has been packed in the first place.
2. Remove all screw-eyes, picture wire and hooks before packing.
3. Wrap objects of a size together and use plenty of filling so material will not shake about.
4. The packing box should be free of holes and cracks to protect from damage by water.
5. Notify us if material is not in good condition when received, or when return shipment is made.

Free Public Library
Newark, N. J.

Pictures used for exhibits are: Photogravures, Medici Prints and Guerin Prints from the print collection; large lithographs for school use and for decoration, see Preface to this pamphlet, and Large Pictures: Educational and Decorative; large foreign posters and posters brought out during the present war; and the inexhaustible supply of pictures which form the subject of this pamphlet. Printed and typed labels, printed broadsides, multigraphed lists and forms, photographs of the picture collection, etc., and special publications of the library, usually form a part of every exhibit.

An exhibit, for example, illustrating the resources of the picture collection might include a special set of pictures on 13" x 17½" mounts with sources indicated, a group of educational lithographs, a framed Medici Print, and printed posters concerning the collection, Figs. 5, 6, 7, 8 and 9. The pictures showing sources bear a typed label, on a 3" x 5" slip, in the lower left corner of each mount, Fig. 10. The first typed line, in every case, is placed the same distance from the top of the label, with a generous margin at either side, and the label is finished with a rule drawn around it with soft black pencil. Numbers are placed in the upper right corner to suggest the order in which the pictures should be hung for the best results.

PICTURE COLLECTION IN THE LIBRARY

For Home and School Use

The pictures in these boxes—50,000 mounted, 400,000 unmounted—illustrate many subjects in the Fine Arts, History, Geography, Science and Useful Arts. They are classified and arranged in a vertical file in alphabetic order according to these subjects; for example, Animals, Architecture, Baskets, Canada, Christmas, Designs, Europe, France-History, Painters, Portraits, Sculptors.

The file begins in the further left box and reads from front to back in the box, and from left to right by boxes.

The pictures are lent to card holders for one month. As many pictures as are needed may be borrowed at one time.

For the collection of engravings, etchings, and other special prints inquire at the desk.

The above refers to the collection in the Art Department, 3rd floor, Free Public Library, Newark, New Jersey.

Fig. 6. Poster shown in Picture Collection Room or with special exhibits sent away. Printed, 13" x 17½".

These pictures should be hung 3" to 6" apart and each on a line with the one above or beside it. Large lithographs contain gromet holes for hanging with wire or on a nail, and if used with small pictures should be hung over rather than beneath them. Though sometimes labeled individually, usually a neatly mounted typed list of titles with publisher and source is hung near them.

Exhibits with Carefully Prepared Labels for Teaching

Following are the typed labels on the pictures which form two large exhibits each illustrating a special subject. The individual labels were typed and attached as described above for source labels. These sets of small pictures were prepared for the use of teachers. The Life of a River was used in the study of "Forms of Land and Water," and the Japanese Garden was part of a lesson given preparatory to a visit by a class to the Newark Museum to see the model of a Japanese Garden. It will be seen that these descriptions not only teach scientific facts about the life of a river, but also lay a foundation for the understanding of what the art teacher calls art appreciation, and the English teacher, correlations of nature and literature.

Life of a River

Each of the following notes is attached to the picture which the note describes or which answers the question asked in the note. Pictures and notes arranged in proper sequence thus form a perfect lesson by the method of "visual instruction."

1. The rain falls in a city. Its drops strike the pavements. Most of them run off into the gutters and are carried away by sewers.
2. The rain falls in the country. Some of it flows away as *run off*, but much of it sinks into the earth.
3. The rain that sinks into the earth may pass through soft, porous soil to meet a harder soil. It may move along the top of the hard layer until it comes out on the surface as a spring.
4. The water forming a spring may have traveled a long way

under ground. The rain that falls on hills far away may come to the surface in a dry plain.

5. Cattle are glad when they find springs to drink from. They cannot dig wells to reach the underground waters.

THE Newark Library lends pictures to Newark residents and special collections for exhibitions to applicants from other places.

For full information about wall pictures, educational lithographs and small mounted pictures see

“Picture Collection”

“Large Pictures: Educational and Decorative.”

“Aids in High School Teaching: Pictures and Objects.”

The Free Public Library of Newark, New Jersey

Fig. 7. Poster sent away with special exhibits describing the picture collections. Printed, 17½" x 26".

6. In the country the water of a spring is often led through wooden troughs so that it flows out conveniently for people and animals to drink.
7. The water from one or more springs flows along in a stream called a brook or creek.
8. Small stones in the bed of a brook cause ripples. A rippling brook makes a noise, sometimes called the song of the brook.
9. A brook in the woods, sometimes flowing over stones or lying in pools, reflecting the lights and shadows cast by the sun through the trees is beautiful. Artists love to paint such scenes.
10. Out in the open the brook is beautiful, too. Its banks cast shadows. It reflects the trees and flowers that grow beside it, and the clouds in the sky above.
11. When a shallow brook flows fast over big stones its waters are broken into foam. Such places are called *rapids*.
12. Many fish live in country brooks. Men follow the stream on foot or in boats, or wade in the water to catch the fish.
13. When the land through which a stream flows consists of a hard layer above and softer layers below, the soft layers may crumble away fast where the stream has once cut through the top layer. Thus a waterfall is made. Whenever a piece of the top layer breaks off, the waterfall moves upstream. Thus the river carves its bed backward.
14. Where the rocks are not in layers, the whole wall is cut back by the water at about the same rate. The rocks may break away irregularly, and the fall may be broken.
15. A wide river, flowing thus from a high to a low level, may make a very majestic waterfall.
16. Where there is a good fall, men divert some of the water into an artificial channel or sluice, and make the current turn a wide wheel by pushing against the flat wooden pieces forming the wheel's rim. Thus they move the machinery in the mill.
17. On almost level lands the stream cuts its bed very little downward, but its gentle current eats its banks away on the sides. When the water strikes one side it cuts away that side

somewhat and is somewhat turned back towards the other side as it flows onward. Thus bends are made. The water on the outside of each bend flows faster than that on the inside. So the outer bank is cut and mud is dropped on the inner side.

18. The making of each bend on the right tends to make the next bend on the left. Thus a stream may travel several miles to get forward one mile, making *ox-bow* loops as it goes. The

IF YOU USE PICTURES

In school work, consider the 400,000 clipped and classified, and 60,000 mounted Pictures which the Library has to lend.



Special Pictures on special subjects gathered on request.

The Free Public Library of Newark, N. J.

Fig. 8. Poster, posted in all schools to acquaint teachers with resources of collection. A picture from the picture collection is mounted on each poster. Printed, 13" x 17½".

soil on the land embraced by these loops is generally fine and fertile.

19. A river is a stream. But a very wide river, with shores that curve in and out looks like a lake.

PICTURE COOPERATION

A Suggestion

Schools not near a large library should cooperate to buy books and pictures. Name a committee to list needed material and divide the list into as many groups as there are schools. Each school pays for its own group. Circulate the groups among the schools, the group from each school returning to it at end of year.

The New Jersey Public Library Commission

Fig. 9. Poster printed for exhibit prepared for New Jersey Library Commission to travel among small New Jersey Libraries. Printed, 13" x 17½".

Forms of land and water - Waterfall

13



Life of a River

When the land through which a stream flows consists of a hard layer above and softer layers below, the soft layers may crumble away fast where the stream has once cut through the top layer. Thus a waterfall is made. Whenever a piece of the top layer breaks off, the waterfall moves upstream. Thus the river carves its bed backward.

Free Public Library, Newark, N. J.

Fig. 10. Mounted picture with description and number, showing position in a series for exhibiting. 13" x 17½", with typed label 3" x 5". (For reproducing purposes a half-sized mount and full sized typed label were used for this cut,—hence the incorrect proportions.)

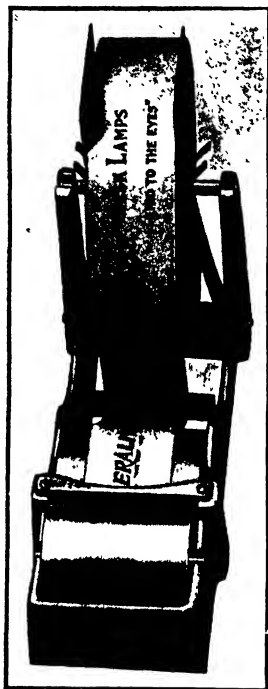


Fig. 13. Acme Tape Moistener. Made by Benjamin L. Grey, Inc., 21 Park Row, N. Y. Price \$5.00 for tape 2½" to 4" in width; \$4.50 for tape 2½" and less in width.

20. Low banks, on rivers that are deep near the shore, provide opportunities for boats to take on and discharge freight and passengers. Many cities are built at such spots. Notice the bridge.
21. Where the trade is very great, docks are built out into the river so that boats may load on each side of each dock, and at the end also. Bridges across a river enable traffic to pass uninterrupted both across and up and down the stream.
22. When trade and travel are brisk, the docks of a city are as full of activity as the business streets.

The Japanese Garden

Another lesson taught by "visual instruction." The notes are attached to the pictures to which they refer, arranged in proper sequence.

1. We feel delight in beautiful scenery, and so when we build houses with grounds around them we wish to make these grounds beautiful also. Is this a scene arranged by nature or by man?
2. Who arranged this garden? The two kinds of landscape are natural and artificial. Which is this?
3. Which kind is this? It is George Washington's garden, kept up as it was in his lifetime.
4. Which kind do you think this is? It is not natural, for it was laid out by men. But they tried to make it look like nature though more beautiful than nature had made it. It is natural in style, but not formal in style.
5. Is this natural or formal in style? It is set at the foot of a hill which makes a good background for it. Formal gardens are often arranged where natural settings improve their effect.
6. When men interfere with nature they do not always improve her. What has happened here?
7. Which of these corners is injured the more by man's decorations? Why?
8. The Japanese are a beauty-loving people. This old chicken house has had a piazza added, which is used for a tea room. Notice the vines, the lantern, and the stones that make a path.

9. If this had been your garden, would you have removed the old pump and box? What did the owner do? Why? We Americans are learning from some of the people of Europe and Asia to make common things beautiful.

10. What have they done to this alley way between the houses? Such good taste as this about a house makes the people who live there happier, and makes the place worth more money.

11. What kind of people live in this place? Why do you think so? Need you suppose they are rich? Why? Good taste is better than money to make a place attractive.

12. This man is fond of water plants, but he lives inland. What has he done?

13. There are many kinds of natural beauty. This kind we call rugged, grand. Think of another adjective for it.

14. What kind of scenery is this? People who live on plains learn to love the wide stretches, where the lights and shadows play as clouds pass above, or as the wind blows.

15. What adjectives would you use about this scene? Does it interest you more or less than the last? Why?

16. Not only do the forms of the land and water decide the style of the landscape, but the shapes of the trees affect it, too. Here are three trees differing in shape.

17. The shapes of the separate trees cause the styles of groups of trees to differ. Would you call these trees graceful, or stately?

18. How about these? Which of these two avenues is more cheerful?

19. This is a tropical forest. Does it attract, or repel you? Why?

20. What kind of a woods is this? From the size of the man describe the size of the trees. How might one feel in these woods?

21. This artist painted pleasant, pretty, soft-looking landscapes. See the gentle slopes of the hills and the curved shapes of the trees.

22. What is happening? What sort of beauty do you find here?

23. Is this picture more like the last, or the one before it? What words would you use to describe this scene?
24. Notice how the trees in the foreground seem to have the same character as the rocks. What words describe this?
25. Even the flowers differ in the different regions. The thistle grows in Scotland, and in dry fields in our country.
26. The May weed raises a small but cheerful head and leaves covered thick with dust on delicate stalks by the summer roadside.
27. Tiny vegetable growths, such as these two little plants, fasten their roots on the surface of rocks and live on almost no nourishment. An artistic gardener knows how to put into each garden the things that seem to belong there, and to put each plant where it looks at home.
28. The Japanese landscape maker makes his gardens in a country where this volcano is the chief feature of the natural landscape.
29. This is a more distant view of the same volcano, taken from a photograph which shows its beauty more plainly.
30. When a Japanese artist paints a landscape he naturally puts into it a mountain of the same sort. Notice the tree, against the mountain.
31. Which, do you think, gives more of the real character of the volcano, this, or the photograph? This artist has in a few strokes made us see the souls of the mountain and the tree.
32. See the kind of rocks that make the scenery in this volcanic land.
33. Here is the same kind of rock, and it has on it trees peculiar to Japan, and that seem to suit the rocks near which they grow.
34. Notice how the tree stretches out protectingly over the people, and how rough, yet good-looking it is. People call it picturesque, rather than pretty or beautiful.
35. In what land was this scene painted? How do you know?
36. What three things in this picture remind you of Japan?

37. The shape of the roof of this building is just as much Japanese as is the shape of the tree.

38. Do you like the attitude of the tree over the roof? Why?

39. Not all Japanese trees are gnarled and twisted. The blossoming fruit trees of Japan, particularly the cherry trees, are known the world over.

40. The Japanese ornament their gardens with stone lanterns of various designs.

41. Some of these lanterns have tops curved like the roofs of the houses.

42. Notice the shape of the lantern top, and the curves in the roof of the gateway out in the water.

43. They put into their gardens also little buildings, really temples, called pagodas, containing images of their gods.

44. Some pagodas are many stories high. The roofs of all the stories make the same Japanese dip. They look picturesque in a landscape.

45. Tell two characteristic Japanese features in this landscape.

46. When an American builds a bridge, he makes it so that people can cross it quickly. It is a place to get over. A Japanese builds a bridge that will look well in the landscape and be a pleasant place on which to loiter.

47. Find two Japanese features in the landscape. Notice the hats of the people on the bridge, and of the people planting rice in the wet field.

48. This is a summer landscape. Where? How do you know?

49. This is a winter landscape. Where? How do you know?

50. Does this bridge look like the other Japanese bridge? It is, however, no easier to cross.

51. Follow my leader in Japan. Notice the stones of the path. How do they differ from our stone paths?

52. Here are stones making a path to a house.

53. Besides the people, what are the peculiar Japanese features of this garden?

54. Find the Japanese features here. One of the most diffi-

cult things to do is so to arrange a landscape garden that it looks well from all sides, and at all seasons.

55. Even the simplest American garden planting must be so arranged that it looks well in winter as well as in summer. The Japanese are masters at these arrangements, as you will see when you examine the Japanese Landscape at the Library. It was made by a Japanese artist.

Charging System.

Any reasonable number of pictures may be borrowed at a time and kept for one month. They must be returned to the library for renewal in order that damaged pictures may be cleaned and remounted.

The record of pictures lent is kept on 2"x5" book slips, Fig. 11, in a box on the charging desk, arranged alphabetically by borrowers' names under date, except large lithographs which are arranged by accession number in each date, according to the Newark charging system. Following are directions for the charging routine:

1. Stamp slip with dater.
2. Write borrower's name, address and card number. (Borrower's card is not dated; it is used only for identification purposes).
3. Note number of pictures taken and list of subjects.
4. Date each picture on back of mount, upper left corner. Successive dates follow one under another, until necessary to begin a new row at the right.
5. Date label of each package, Fig. 12.
6. If pictures are lent unmounted (which is done at the discretion of the assistant in charge), or in the form of booklets, so state on charging slip, and date back of picture.
7. When mounting pictures while the borrower waits do not print heading at the top of the mount since it appears on the margin of the picture, and can be added when returned. Double

tures are taken to the school by wagon and are called for at the expiration of one month, the teachers being previously notified by postal of date of collection. School packages are delivered and collected by wagon once a week. The expense of all school deliveries is borne by the Board of Education.

The Free Public Library of Newark, New Jersey

Pictures are lent for one month on borrowers' cards. For each package of pictures not returned or renewed a fine of two cents a day is charged.

Packages should be carefully wrapped when returned, and should bear borrower's name and address.

Break all seals when you open the package if you wish to return pictures in original wrappings, as pictures are torn if slipped in at the open end of the wrapper.

Picture Department.

Fig. 12. Label pasted on each package of pictures lent, on margin of which is written borrower's name, date and total number of pictures taken. $3\frac{1}{2}'' \times 5\frac{1}{2}''$; Printed.

Wrapping Pictures.

In tying up pictures for borrowers to take away, we find very convenient the Acme Tape Moistener, Fig 13. Price \$5. It works on the same principle as the Bull Dog Sealing Machine, no longer manufactured. A similar machine is made by the National Binding Machine Co., 260 West St., N. Y.

This machine is simple, but not easily described. It contains a spool of paper tape one inch wide and 800 ft. long, gummed on one side. As this tape, used in place of string, is pulled off the spool, it passes over a moistened pad which wets the gum and makes it ready to attach at once. The spools of paper cost 35c each.

Overdues

An overdue postal, Fig 14, is sent when pictures are one week overdue and a letter, Fig 15, at the end of the second week. The third week a letter is dictated if pictures are many or of

special value. A messenger is sent if there is no response to this letter. For a few pictures of little value further steps are not taken after the second notice; but a fixed fine of 50c, plus the cost of the pictures, is filed against the borrower's name in the registration file. This is done to save the time and labor of an expensive follow-up system and to prevent large fines from accumulating on pictures of little value.

Fines

A fine of 2c a day is charged for each lot of pictures overdue. When a portion of one lot of pictures is returned overdue, and the rest returned at a still later date, a note of the number of pictures returned and the date, is made on the charging slip and fines for the second lot are reckoned from the date of return of the first lot.

Loss and Damage of Pictures

If any pictures lent belong to special sets and have a value of 25c or more, an abbreviated note of this set is made on the charging slip so that full value of the pictures may be collected if any are lost. A fine of 3c is charged for loss or damage of either picture or mount; 5c for both. This refers to pictures having no intrinsic value. Others are charged for according to value.

Method of Storing.

When this collection was started, the pictures not mounted were grouped by subject and were placed in folders made from manila paper, cut 17 1-2" x 28" and folded to a size 13" x 17 1-2" by turning down a flap 6" wide across one end of the paper and a 9" flap at the other end. The name of the subject was written close to the folded edge on the narrower flap of each folder. The folders were arranged alphabetically and kept in pasteboard boxes, 18" x 14" x 4". One side of these boxes is on a linen hinge. Any desired folder could be consulted without the labor of removing a box from the shelf, as by lifting the cover the hinged side, which was always kept toward the front of the

shelf, could be dropped, thus disclosing the folders labeled along the edge and lying horizontally within.

For description of folders now in use, which are filed with mounted pictures, see under Folders for Unmounted Pictures.

As the demand for pictures increased the more popular ones were mounted for lending on uniform mounts, 13" x 17 1-2"; and

The Free Public Library of Newark, New Jersey

April 15, 1916

We would remind you that the pictures: 4 Children,
7 U.S. History, 3 Design - Japanese
borrowed March 8, 1916 have not been
returned to the Library.

Yours truly

J.C. Dana, Librarian
Per *act*

Fig. 14. Postal notice mailed to borrowers when pictures are one week overdue. Multigraphed.

The Free Public Library of Newark, New Jersey

John Cotton Dana, Librarian

Dear

The..... pictures illustrating.....
which you borrowed....., are..... days overdue.
A fine of two cents a day is charged on every lot of pic-
tures kept over one month.

Yours truly,

J. C. Dana, Librarian
Art Department
per

Fig. 15. Letter form to be filled in for pictures still not returned one week after first notice was sent. 5 1/2" x 8", multigraphed.

boxes to hold the mounted material, Fig 16, were constructed of half inch whitewood stock. The measurements of these boxes are as follows: Base, 14 1-2" wide, 25 5-8" long; sides 18 5-8" high. Extending across each box, midway from front to back, is a vertical partition of compo board which keeps the pictures in an upright position, even if there are only a few in a box.

Compo board is a material, quarter of an inch thick, made of strips of wood about an inch wide glued together between two layers of thin pasteboard. It costs 6c per square foot. It comes in sheets 4' wide and is obtainable in any length up to 10'.

To bring the boxes up to a convenient height they are placed on bases 20 3-4" high and 25 5-8" deep. These bases are built in sections 7' 6" long, each section holding six boxes.

The face of each base is boarded up 9 5-8" from the floor, leaving an open space above of 11 1-8", Fig 16. This space is divided in half longitudinally, leaving two shelves for storage purposes, and vertically to make two sections 3' long and one section 1 1-2' long. This was done, instead of making the sections of equal lengths, to accommodate cardboard storage boxes, 18" x 14" x 4", and packages of "filed" plates, to the best advantage.

The bases are placed in pairs back to back. The boxes are placed on the bases, also back to back and against strips of wood, 1" quarter-rounds, nailed near the backs of the bases and bringing the front of each box exactly even with the front of the base, which is 1 1-4" deeper than the boxes. For each pair of bases is provided a frame which stands between the backs of the two rows of six boxes each, resting on the pair of bases in question. This frame is made of 3" strips of 7-8" lumber. It is as long as are the bases and 39" wide and thus rises to within about 6" of the tops of the box covers when they are thrown open against it. It is strengthened in the middle by a cross bar. It stands on the bases along their meeting point, with the 1" quarter-rounds which hold the boxes in place close against each side of it. It is held upright by a brace which rises from one

base to the cross bar nailed at such an angle as to give the frame ample stiffness.

A cover of compo board covered with brown Rugby wrapping paper is attached by means of hinges to the back edge of the top of each box.

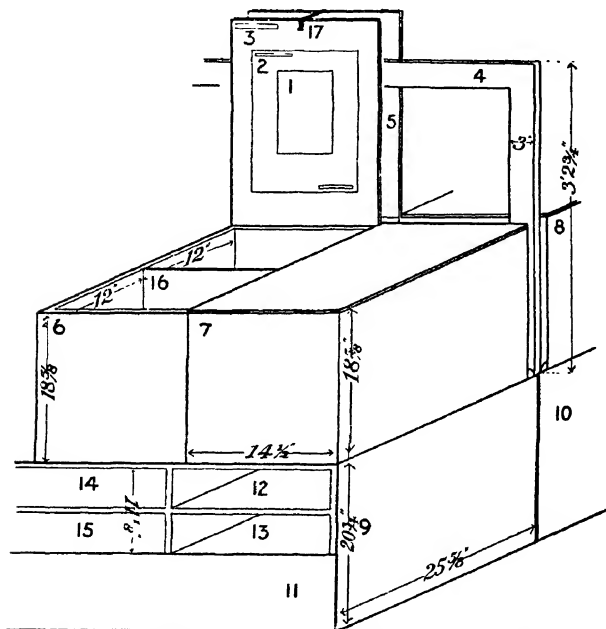


Fig. 16. Diagram showing construction of storage boxes for pictures, bases, and frame to support box covers.

(1) Picture, clipped and mounted. (2) Mount of same. The written legend for picture is indicated just above figure 2. In lower right corner is stamped Newark Free Public Library. (3) Cover of box, of compo board covered with brown Rugby paper. The legend on this cover, printed, indicating what are the particular contents of this box, is just above figure 3. (4) The frame which stands between two rows of boxes and supports the covers when they are held back. (5) The back of cover of box on the other side of frame. (6) One of the boxes with cover open. (7) Another box with cover closed. (8) The box which backs up to No. 7. (9) The base of the boxes in front. (10) The base of the boxes behind. (11) Base board on the front of the base. (12) Shelf 1 1/2' wide. (13) Ditto. (14 and 15) Shelves 3' wide. (16) Compo board partitions in the box. (17) Metal clip which holds the two covers together when boxes are open.

Each box holds about 500 mounted pictures, or several times as many if unmounted. The mounts stand vertically in the boxes like cards in a catalog. They may be easily consulted, for each picture has its name at the top and the entire series is arranged alphabetically. The borrower can read the names and see the pictures as he turns them over without even removing them from the boxes, except for close inspection.

At night the covers protect the pictures from dust; during the hours when the picture collection is accessible to the public, the covers are raised, and rest against the rail. The covers of the two opposing rows of boxes rest against the rail, meet about 6" above it and are held in that position by a metal clip, U shaped, Fig 19.

Nine pairs of bases hold 108 boxes or two rows of six boxes each, placed back to back.

The chief subject in each box is printed on a label 1" high and 4 1-2" long, in 30 point, upper and lower case, pasted in the upper left corner of the inside of the box cover. This subject label serves as a guide to the alphabetic arrangement of the pictures, but does not mean that all pictures in a box are on the subject named, as the file is continuous and one box often contains several subjects. The last two boxes in the file, which stand next the work table and charging desk, are reserved for pictures to be filed and pictures to be called for, and are so labeled.

A mounted picture, specially clear, large, or in color, is thumb-tacked to the inside of each box cover. When the covers are open these pictures all show and form a little exhibition giving the casual observer an idea of the diversity of subjects represented in the collection and definite suggestions to the borrower in search of ideas, Fig 19. These pictures are, of course, removed when needed for lending.

On the covers of certain boxes containing history material a typed list of the headings used in filing this material is posted instead of a picture, Fig 17.

England—History. Periods and Sovereigns

1500 B.C.-55 B.C. Prehistoric	Edward IV
55 B.C.-410 A.D. Roman	Edward V
449-1066. Saxon and Danish	Richard III
Alfred the Great	
Sweyn	1485-1603. Tudor
Canute	Henry VII
Edward the Confessor	Henry VIII
Harold	Edward VI
	Mary
	Elizabeth
1066-1154. Norman	
William I	1603-1714. Stuart
William Rufus	James I
Henry I	Charles I
Stephen	Charles II
	James II
1154-1399. Plantagenet or	William and Mary
Angevin	Anne
Henry II	
Richard I	1649-1660. Commonwealth
John	Cromwell
Henry III	
Edward I	1714- . Hanoverian
Edward II	George I
Edward III	George II
Richard II	George III
	George IV
1399-1485. Lancaster-York	William IV
Henry IV	Victoria
Henry V	Edward VII
Henry VI	George V

Sets of pictures published by centuries, the 11th to the 18th, are filed at the end of the above outline.

See also England—Government for Coronation ceremonies, Parliament, etc.

Fig. 17. Headings used to classify pictures of English History; this list is typed and posted on the box cover. 13" x 17½".

Holiday Pictures Stored

The full collections of pictures used chiefly on special occasions, Washington, Lincoln, Thanksgiving and Christmas pictures, for examples, are not kept in the file all of the year. Most of them are wrapped and stored in the stack until the season of their demand approaches, when they are placed in a special box near

the general collection, to be replaced in turn by others. Beneath the picture on the cover of the box a printed label, on a board the width of the mount, reads: "Only———pictures lent to one person." Printed numbers, from four to ten, are inserted, fixing the limit of pictures lent. Thus all of the material is not monopolized by the early comers long before the actual date when the pictures are to be used. By thus storing this material when out of use filing space is gained for pictures in constant use.

Plates or Pictures in Sets, coming in Books or
Portfolios, usually expensive,—How Filed.

With the material stored in the bases of picture collection boxes (see under Method of Storing) are portfolios of fine plates of flower design, furniture, rugs, textiles, etc., usually without texts. These are received from the catalog room with a catalog card, either author or title, bearing no call number. Volumes of plates without text are not classified. The legend "plates filed" is noted on the card with date of purchase, source and price, and the card is then filed in the catalog of the art department, on the shelves of which the volume would naturally be placed.

The plates are filed in the base of the box containing pictures on the same subject. A "see also" reference on a standard mount is filed in the proper alphabetic place, so doubly indexing the material stored beneath.

Folders for Unmounted Pictures

When folders full of pictures are piled one upon another, as our pictures were formerly kept, it is impossible to take out the lower folders without supporting the weight of all the upper ones. This disadvantage is overcome in the vertical method of filing, which is so much more convenient that nearly all unmounted material has now been transferred to the wooden boxes where it immediately follows the mounted pictures on the same subject. The original horizontal method of filing is no longer used, save for the storage of pictures which are rarely called for.

The folders used in the vertical file for unmounted material, Fig. 19, are made of manila paper, cut 30" x 32", as follows:

turn up a flap 7" wide entirely across one of the long edges of the paper. This later makes a pocket at the bottom of the folder, which prevents the pictures from falling out. To make a corresponding fold at the top of the folder, place a heavy piece of pulp board, 13" wide and 5 1-2" high, lengthwise along the top edge of the bottom fold, then bring the upper edge of the paper down to meet it and fold. Make the side folds over the board about 12" from the right edge and 7" from the left. The completed folder is 13" x 17 1-2". Pictures cannot slip out of the bottom and dust cannot get in at the top. The subjects covered by the pictures in each folder are written in the upper left corner. The paper is jute manila, 30" x 40", 150 lb. No. 1 folded. 6c per lb. Each folder costs about 1 1-2c. There is 8" of waste in the 40 inch dimension, since the sheet when ready to fold measures 30" x 32".

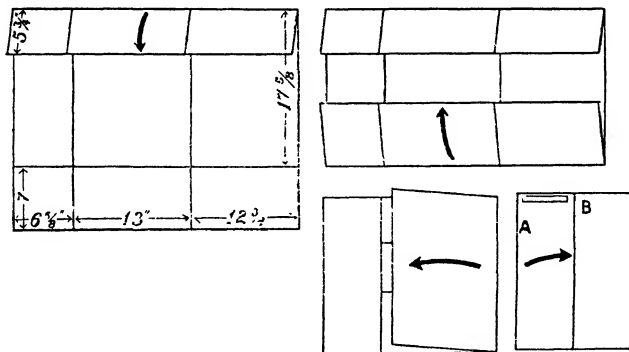


Fig. 18. Folder for storing unmounted pictures; filed vertically. Manila paper, 30" x 32", folded to 13" x 17 1/2". B is the wider right fold, 12 3/4" wide. A, the left fold, 6 1/2" wide, folds over B and at the top is written the subject of pictures filed within.

Working Plan of the Room

The present system of vertical filing is very satisfactory; its

chief drawback is that it requires a large amount of floor space. As the collection grows we shall place the boxes on their sides and put them on top of each other, when the pictures will stand on their edges instead of their ends.

The space occupied for the management of this collection is 24' x 50' 10", Fig 1 and 19. As shown in Fig 1, at one end of the set of picture collection boxes, No 1 to 9, is a long work table, No. 12, on one corner of which stands the cutter, No 13; a low sewing table and stool at its side for the mounting board, No 14, (the height of a low sewing table is convenient and comfortable for the work of mounting pictures); the charging desk, No 10, at which all pictures are received and charged, and on which stand the slip boxes; and the desk of the assistant in charge, No 11. At one side, removed from the center of operations just described, is another table, No 15, adjacent to the picture collection boxes, on which pictures may be displayed for borrowers, and where special work on special collections of pictures is done.

Pictures Mounted as Required

The mounted pictures, now numbering about 50,000, form a very satisfactory working collection. When new pictures are received, only those illustrating subjects in much demand are mounted; the others are merely sorted and filed in the folders containing other unmounted material on the same subjects. When a borrower inquires for pictures on any subject, he is first referred to the mounted collection. If suitable mounted pictures are not available, the reserve supply of unmounted material is consulted, and the pictures selected are mounted immediately if desired.

By mounting pictures as they are asked for and as experience of demands regularly received suggests, instead of adding promiscuously to the mounted collection, the public is well supplied and the library has a minimum of mounted material for which to provide storage space.

Mounts for Pictures

A standard sized mount has been adopted, 13" x 17½".



Fig. 19. View of picture collection room, showing boxes, covers, bases with storage shelves, work table with cutter, low table for mounting board.



Fig. 20. The Boston Cutter, used for trimming pictures. Made by the Golding Manufacturing Co., Franklin, Mass. 24" blade. Price \$22.

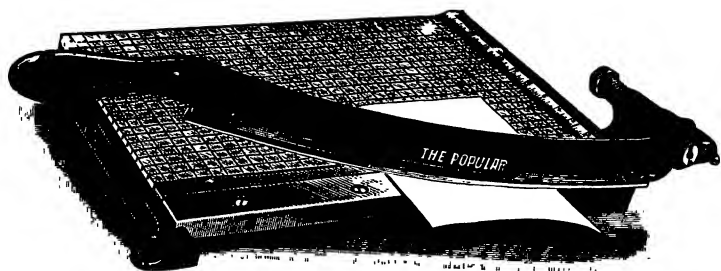


Fig. 21. Popular Cutter. Made by Milton Bradley Co, Springfield, Mass. 15" blade. Price \$7.50.

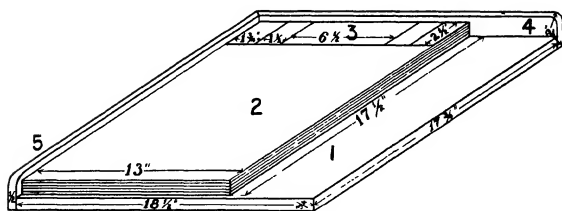


Fig. 22. Mounting board and guide card with the aid of which pictures may be placed on the mount in the center and on a straight line without measuring.

(1) Heavy board. (2) Pile of mounts. (3) The location card. (4 and 5) The raised ledges which hold the mounts in place.

Where it is necessary to economize space a thin mount is essential.

The mount that we use is fragile and turns yellow with time. Nevertheless we have continued to use about the same kind and quality for ten years, because, of all the material we could find, the least expensive and most satisfactory in color was this. We discovered that the best method was to take inexpensive material that we could afford to throw away and renew often, rather than to buy a less perishable material that we could not afford to throw away when broken or soiled. Pulp board No 80 is thin enough, has an agreeable surface and a slight cream tint, and is used for all pictures except more expensive colored photographs or fine plates removed from books. For these an additional mat of strong green or buff paper is used over the face of the picture's edges, the mat hole cut to size of picture, and the outer edges pasted down on the back of the pulpboard mount. In some instances, to safeguard the picture, a heavier pulpboard, medium weight, is used without a mat. The Dekorative Vorbilder plates have been so treated because of their number, which would make matting too expensive and too cumbersome for filing purposes. The light-weight pulp board formerly used, cost \$1.50, plus expressage, per bundle of 80 sheets, 26" x 36". The number, 80, is the number of sheets in a bundle. When cut to standard size each sheet made four mounts; the cost of a single mount being a trifle over half a cent. For the last year we have experimented with a new mount which promises to be very satisfactory. It is lined pulp, a cream color on the right side, about the same tint as the other kind, with lined back having a bluish, rather smooth surface. The present indications are that this board does not yellow as soon and is somewhat stronger than the other. It formerly sold at \$1.50 a bundle. The present price is \$2.25. Almost all large paper dealers sell pulp board.

Mounting Pictures

Before mounting, the margins of the pictures are evenly trimmed. At least a half inch margin on all sides, and more if possible, is

left on pictures that are to receive much wear so that if it becomes necessary to renew the mount, the print may be removed and retrimmed without injuring it.

For trimming the margins of the pictures with precision and rapidity a cutting machine is much superior to scissors. The Boston Cutter, Fig 20, having a 24" blade with front and back gage, price \$22, made by the Golding Manufacturing Company, Franklin, Mass., is very satisfactory. The Popular Cutter, Fig 21, having a 15" blade, price \$7, made by the Milton Bradley Co., Springfield, Mass., is also satisfactory for general use. Larger and smaller cutters are made by both companies.

For the sake of speed in mounting and ease in removing from the mounts, ordinary prints are pasted at the four corners only, and there very lightly. Spontem, a paste in powdered form, is used. 8c per lb. or 6c by the barrel. The quantity needed may be mixed by stirring in hot or cold water until the proper consistency is reached. Two teaspoonsful will make half a glass of paste. The paste is applied to a very small area and the brush is drawn toward the corners of the picture, so that the tips receive the paste and are held down securely. All the trimming of a group of pictures to be mounted is finished before the pasting is begun.

Pictures are placed in the middle from left to right and always $2\frac{1}{2}$ " from the top of the mount. This is accomplished by means of guide card and mounting board, Fig. 22, which may be easily constructed. The mounting board is a flat board about 1" longer and wider than the mounts, having on two edges, the left and the top, a rim made of a strip of wood extending $1\frac{1}{2}$ " above the surface of the board. These two strips form an exact right angle at the upper left corner of the board, into which a pile of mounts may be fitted and held in position. The guide is then laid flush with the upper edge of the top mount. This guide card is a piece of card board 13" long and $2\frac{1}{2}$ " wide. Five heavy black lines are drawn across it: one at its center and the others $1\frac{3}{4}$ " and $3\frac{1}{2}$ " from each end. These marks make it quite easy

to place a picture in the center of mount from left to right, and at the proper distance, always $2\frac{1}{2}$ ", from the top. For example, suppose a picture to be mounted is 5" wide after trimming. Paste the four corners as directed. Hold the top edge so that it touches the lower edge of the guide card, then note that the two top corners of the picture are equidistant from the two inner marks on the guide card. These two marks are 6" apart and a 5" picture extends within half an inch of each mark. These distances are readily measured by the eye.

With this simple device it is easy to mount pictures rapidly and yet to have none of them vary more than a small fraction of an inch from the right and left center.

Each mount is removed, as soon as the picture is pasted upon it, from the top to the bottom of the pile, the weight of those above pressing each picture in turn.

The words, "Free Public Library, Newark, N. J.," are stamped with red ink in the lower right corner of each mount.

Handling and Display of Pictures

Constant repair of pictures and mounts is one of the chief items of expense in the general upkeep of a large working collection. The condition of pictures when returned depends upon the use to which they have been put. Teachers are cautioned against allowing children to handle them freely in the schoolroom and are asked, if thumb tacks are the only means available for hanging, that they be placed, with care, only in the extreme upper corners of the mounts. In some of the grade schools a light molding has been placed above the blackboard just high enough to allow pictures to be slipped into the space so made. Pictures are slipped under the molding and are supported by the top edge of the blackboard. Thus they can easily be seen, need not be handled, and at the same time add to the attractiveness of the room.

Filing and Repair of Pictures

A pile of pictures newly mounted, or returned by a borrower, to be filed, is arranged alphabetically on a long work table. This

process is the same as for small cards, one picture after another being removed from the top of the pile and placed in its proper alphabetic position along the table. Pictures needing fresh mounts are set aside in a separate pile. When all are arranged they are put alphabetically in a pile and repair work is begun on the top picture. Each picture is now examined, repaired if necessary and then placed face down at the right. They are then carried from box to box in the picture collection and filed in proper order, mounted material standing in front of folders of unmounted material on the same subject.

Tears in pictures are mended with Dennison's adhesive transparent tape. A large ruby eraser is used for cleaning mounts. A strip of gummed paper sealing tape on the back of a slightly broken corner of a mount will preserve it if otherwise in good condition. The cutter is used to chop off broken or yellowed edges. This cannot be done to a great extent because, if cut too small, the

School
Teacher
Grade
When needed
Book wanted
 Give title or subject

Pictures wanted
 Large or small

The Free Public Library of Newark, New Jersey
Teacher's request blank

Fig. 23. Request blank furnished by the library, on which all requests are received from teachers. Multigraphed, 5" x 8½". For correct proportion of this form see Fig. 29; proportions are not kept here for convenience in printing.

mount is lost sight of in the file and is missed in a package of pictures being counted and charged to a borrower. Pictures are removed from the mounts with a flat steel blade which can be so manipulated that they generally come off without tearing. A thin layer of the mount may be removed with the picture when it does not readily come free. Pictures to be lent are looked through quickly for damages while the borrower waits; for although filed away in good condition, they are frequently damaged from handling in the file.

Each summer when most of the pictures are on file the whole collection is examined and weeded. This keeps the collection within bounds and puts it in shape before the winter rush begins. Pictures are removed from mounts in poor condition and filed unmounted in folders; mounted pictures needing repair are taken out, cleaned, edges trimmed and re-filed; pictures always in demand are remounted when the mount is in bad condition; poor pictures and duplicate pictures are removed from folders and thrown away. For assistants doing this work sets of the following typed instructions, mounted on board, are placed on tops of piles of pictures to be repaired:

Remounting

1. Remove from mount, following usual rules, see under Filing and Repair of Pictures.
2. Put loose pictures in special folder marked "Taken from file for remounting", and file in Repair box to be worked on later.
3. Put old mounts on table in rear service hall.

Repair of Mounted Pictures

1. Cut stained or tattered edges of mounts at top, regardless of heading. If heading is partly or altogether cut off, copy on picture before cutting. Mark all mounts before filing.
2. Pictures needing special repair can be set aside, to be pasted, mended, cleaned, etc.
3. When all have been done arrange and file.

Remove from Mounts for Filing Unmounted

1. Copy heading from mount to lower left corner of picture.

2. In loosening corners cut into old mount rather than break corner of picture.
3. Repair picture if necessary.
4. Count old mounts and keep record of total.
5. Put old mounts on table in rear service hall.
6. Put loose pictures in black file box which contains alphabetic filing folders.
7. Sort pictures in black file box into folders and file in proper folders in picture collection.

Use of the Library's Pictures by Schools

Pictures and books have, for 14 years, been delivered weekly to schools by the library. In 1909 the Newark Museum Association was organized and housed in the library building. Very soon thereafter it began to accumulate and to lend to teachers objects for the illustration of subjects taught. The machinery for

The Free Public Library of Newark, New Jersey

We are sending you the material for which you ask. Kindly sign the enclosed liability slip which will then be kept on file and will be used in place of a card. The form, signed by you, must be presented by messenger whenever material is needed.

You will see that a uniform charging system is necessary in order that our readers be spared annoyance through incorrect records.

Yours truly,
J. C. Dana, Librarian
per

Fig. 24. Form sent to teachers with request blank, Fig. 23, and liability slip, Fig. 25, when requests are received by messenger without borrower's card. Multigraphed, 5" x 8½".

lending and transporting museum material to schools was made uniform and combined with the arrangements made by the library for its books and pictures.

The cost of transportation to and from schools has always been borne by the library until within the last two years. The Board of Education then, at the request of the library, undertook this expense under the same conditions.

The use of the picture collection by teachers has been so heavy that it was necessary to limit free transportation to large lithographs which are unwieldy to handle. To guard against damage these are delivered only in a wooden case built for them which fits the large express truck by which the delivery is made. Packages of small pictures are not delivered to schools by wagon, except by special arrangement with certain schools, described below, in which teachers' requests are systematized under the direction of the principal. This arrangement, which is still experimental, is now in effect in nine schools. The weekly delivery which grows constantly heavier as the use of the library's collections by teachers

Card no. 42732 Date <i>8.31'08</i>
The undersigned will be financially responsible for books drawn on card number, in case the <u>library records</u> show these not to have been returned.
(Signed) <i>Daniel Coupe</i>

Fig. 25. Liability slip which must be signed by borrowers who borrow books or pictures without borrower's card. Filed in Registration file. Pink, printed, 3" x 5".

increases, has been divided to take half of the schools on Wednesdays, and the other half on Fridays.

Requests from schools are received direct from the teacher, through branch libraries, by mail or telephone, or by a pupil sent

School libraries. Teachers may send through a branch, or telephone on short notice a request to have small pictures sent to the branch by this delivery. The usual routine in regard to registration is followed. Notes of explanation to a teacher are always sent by the assistant in charge when the case cannot be covered by forms in use.

Large pictures are lent to both elementary and High Schools for four weeks. Teachers are notified on Saturday by postal, Fig 26, to have pictures due the following week, in the principal's office ready for collection the day before the school delivery, on Tuesday or Thursday, as the case may be. The postals are filled in from the slips for large pictures charged on Tuesday and Thursday, four weeks prior to the trip days of the following week.

Picture Collection Trip - Oct. 25, 1916

Belmont Av. School
 Deliver 2 pkgs Willis
 " 2 " Shemeley
 " 10 (small) Gleason
 Collect - Krauter

Central Av. School
 Collect - Brown

Cleveland School
 Deliver 1 pkg. Zueibel
 Collect - Hagney

Newton St School
 Deliver 20 pkgs. (small) West
 " 2 " Booth
 " 1 " Pfeiffer
 " 1 " Bagley

Fig. 27. Part of a memorandum of deliveries and collections sent weekly from the picture collection to be arranged for the expressman by the branch and station department.

A list, Fig 27, of the schools to be visited by the expressman, the number of packages to be delivered or collected, and the teachers' names is sent to the branch and station department where the trips are planned, at 4 o'clock on Tuesdays and Thursdays. All material for museum, school libraries and picture collection, Fig 28, is delivered and collected at schools on these trips.

Q. 25/16	Place	Deliver	Dept	Collect	Signature	Notes
21	Newton St Sch So Orange Av.	4 boxes - Banner 1 pkg Rudensay 1 " " 2 cases - Bolin 20 (small) Office 1 envelope	M M A S A "	1 pkg Rudensay 1 case - McGlone Whatever ready	C. X. West	not ready
22	Belmont Av Sch W Tunney St	1 pkg Office 17 pkgs (small) Office		pkgs - Parker Whatever ready	C. H. Giesse	
23	So Side H.S.	4 boxes - Denton	M		H. J. Wolfe	

Fig. 28. Schedule for school deliveries and collections as prepared for expressman, who makes stops in order given, delivers and collects only what is listed and signed for by the principal's office. Column "Dept." shows who sent out material: A—Art Dept.; M—Museum; S—School libraries. Art Dept. packages are large lithographs except those marked "small," which are from picture collection. Double page from ruled blank book.

The management of requests for pictures received from teachers and the matter of transportation has led to a series of experiments working toward a system which shall bring the most satisfactory results,—that is to select and deliver to teachers a large number of pictures, books and museum objects with the least possible effort on the part of the teacher, and with the greatest economy for library and museum in the routine of filling requests, checking up, collecting from the school at the proper time, sending notices for overdue material, etc. These experiments have been modified and worked into the scheme described below. This routine is in

effect in nine schools; it is being adopted in others as soon as requested by the principals.

Routine for Schools having Special Arrangement for Delivery and Collection of all Library and Museum Material

The library will deliver to the school on its weekly trip all material asked for,—books, pictures, Museum objects and school room libraries.

Requests must be mailed from the principal's office on multi-graphed forms provided by the library, so as to be received at the library in the morning three days before the day of the trip. Thus, for delivery on Wednesday requests must be received on Saturday morning, and for the Friday trip on Tuesday morning.

All material is charged the day before delivery, and is due one month from that date. Teachers are subject to the usual borrowers' rules.

The library collects large pictures and Museum objects four weeks after delivery. In order that material may be properly wrapped and ready for the expressman when he calls, notice is sent to teachers three days before the day of collection.

The library will also collect small pictures and books, if request to do so is received the morning of the day before the trip. Teachers may or may not take advantage in this way of the trip and are free to return material at the library before the weekly trip if they wish.

Books should be wrapped in paper if not returned in one of the library boxes.

The expressman has orders to collect everything that is ready to be returned to the library. The school and not the expressman is held responsible for the return of all material due on the day of call.

Process of Charging School Requests

Requests are first sent to the Museum office where note is made of charts and objects needed. They are then sent on at once to an assistant in the picture collection who sends a note of book requests to the school and children's department. The blanks are

dated, and work is begun in selecting pictures asked for. When the selection for one request is completed the request blank is clipped to the pile of pictures, and placed on the work table to be looked over by the assistant in charge for criticism.

If large pictures are sent in addition to small pictures, their accession numbers are recorded on the request sheet, see *Large Pictures Educational and Decorative: Lending and Charging*. The pictures are then cleaned and remounted when necessary, charged and wrapped. About 30 small pictures will wrap well in one package. If more are to go to one teacher an additional package is made and "in two packages" is noted on wrapper and charging slip. The name of the school is clearly marked across the upper left corners of the packages and they are sent to the branch and station department, with the list of schools, teachers' names and number of packages to be delivered and collected, Fig 27. Request blanks are cancelled as soon as the work called for is completed, and are filed for one month.

Nature of School Requests

The following are typical requests from the lower grades: Lion, Jackal, Jungle, Bridge, Gnome, Apple Tree, Thorn Bush, Brownies. No picture of a thorn bush was found and the fact was so noted on the package wrapper. A 6B teacher asked for: First Pacific railway, Western Farms, Weather Bureau, McCormick's Inventions, Building of the Jetties on the Mississippi River, New Orleans as a Great Seaport, Fig 29.

In selecting material several pictures are often required to cover one subject and unmounted pictures are drawn upon as needed.

As many as 1300 large and small pictures have been selected and charged to teachers from the schools of the city in one day.

Pictures Grouped by Subject

When beginning picture work with high schools special material was brought together and lent in sets, for example: Art for Art's sake, pictures showing Action, Time of Queen Anne, and the English Novel. Some on Johnson, Chaucer, Milton and others were selected with the aid of a typed outline which is compiled,

listing contemporaries, landmarks, historic backgrounds, etc. The sets were held together in the file by a paper folder as wide as

53151

School *Belmont Ave.*

Teacher *Charles Trauter*

Grade *673-62*

When needed *March 8, 1916*

Book wanted
Give title or subject
Moving Inventions and inventors

4MR'16A

Pictures wanted
Large or small

1. <i>First Pacific Railway</i>	661	} large selected
2. <i>Western Plains</i>	629	
3. <i>Weather Bureau</i>	885	
4. <i>M' Cormick's inventions (mower, reaper, etc.)</i>		
5. <i>Building of jetties on Miss. River by Capt. Eads</i> <i>(New Orleans as a great seaport)</i>		

If the Branch cannot supply the material from its own collection, kindly let us know if you wish material ordered from the Mail Library.

The Branch delivery is made weekly, on Fridays at 3 o'clock.

The Free Public Library of Newark, New Jersey
Teacher's request blank

Fig. 29. Canceled request blank received through a branch, after pictures have been selected and sent. 5½" x 8". Multigraphed.

the mounts are long, open at top and bottom, drawn around each set and sealed with gummed paper sealing tape where the edges

met. As the demand for this material and the difficulty of duplicating it increased, however, it has been necessary in some cases to break sets and to divide them among several people.

To assist in the selection of pictures often called for at certain seasons,—Spring Birds, Flowers, etc.,—a list of related subjects on a standard mount is filed with pictures on the main subject. With this for a guide pictures are easily gathered from the alphabetic file of birds and flowers. This scheme has been followed for: Animals—South America, Birds—Game, Birds—Prey, Birds—Permanent residents, Birds—Spring, Europe—Rivers, Flowers—Spring, Plants—Temperate zone. By this arrangement we avoid the evil of breaking up the simple alphabetic arrangement by subject into an alphabetic series of classified groups.

General Use Made of the Collection

The collection is used in so many different ways that it is impossible to mention all of them. The variety of subjects called for may be seen from the following questions recently received:

Picture of a Ballot Box

Costume of a Moorish Prince

Balloon Experiments of the English in the Dardanelles

Bird Reservations

Street Kiosk

Spanish Renaissance Church Interiors

Lincoln Highway

American Flag and Coat of Arms

Electric Percolator

African Design for Carving a Heavy Stick

Correct Color for a Halftone Picture of an Elephant

Cover Design for Commercial Booklet

Front View of Dachshund for Jewelry Design.

Teachers, who are, perhaps, the most regular borrowers, use pictures to illustrate lessons in mathematical, physical and political geography, history, civics, nature study, science, literature, domestic economy, industry, art and science; as subjects for composition; to illustrate stories; as points of departure for talks and for decoration.

Women's clubs use them to illustrate any subject they may be studying,—architecture, home decoration, city planning, civic improvement, safe and sane Fourth of July, playgrounds, street cleaning, history, travel, art, artists, poets, and many other topics.

Newspapers use them for portraits, scenes, historic events; and newspaper illustrators, sign painters and draughtsmen for any of the many subjects for which they may need either suggestions or definite objects.

Progressive manufacturers send to them for motifs in design applied to their products; costumers and pageant makers for suggestions in scene and costume design, and artists and authors for information and inspiration.

This department answers requests by mail from many sources in this and neighboring states, from artisans and interior decorators of New York, and from patrons in distant parts of the country seeking illustrations of special subjects.

The collection is supplied almost automatically from the stream of material constantly flowing through the library. It consists, as already stated, of several hundred thousand classified pictures, many of which are clipped from magazines, perhaps one-fourth of which are mounted. It is supplemented by many other collections which are used in connection with it. These include about 1,800 large decorative and educational pictures, see pamphlet thereon in this series, by the special plates already noted and by the following: 2,500 book plates, 600 lantern slides, 5,500 postcards, 5,000 photographs, 640 posters and 6,500 poster stamps. All of these are lent on demand.

It is long past the experimental stage, its contents being almost as commonly known and as widely used as are the books which they supplement. In 1915, 80,770 small pictures were lent; 11,642 small pictures were added to the collection. Although so large the collection is carefully selected. It is in a constant state of flux. If 11,000 pictures are added, as many have probably been discarded. Those not in demand, or poor examples, are thrown out daily and superseded by better material.

Classification

The classifying and cataloging of the collection of pictures described in this paragraph have been carefully considered from time to time in the 14 years since it was begun. Our experience has led us always to the same conclusions, that no arrangement is as good as an alphabetical one by subjects; and that the pictures, under this arrangement, need no catalog since they themselves form their own. They stand on their edges like cards in a catalog, and the names of the subjects under which they are arranged being written near the tops of the mounts, as described, they are easily consulted and pictures on any desired subject are easily found. Photographs and other pictures used by art students would be perhaps more easily and more advantageously used if closely classified and quite elaborately cataloged on cards, in the usual way. Our picture collection forms an alphabetically arranged iconographic encyclopedia for which no index is needed. As occasion arises mounts are added, without pictures, bearing cross references.

Our own photographs, 5,000 in number, are, unfortunately mounted on the usual photo mount of dark cardboard, 11" x 14", and are in a series of boxes by themselves. They would be far more useful were they uniform with our picture collection and kept with it.

It seems impossible to devise any permanently satisfactory system of classification that will include all the details of arrangement and settle the complications that are continually arising. The classification of this collection frequently undergoes minor changes, the primary object being not so much to keep it a model of consistency as to have the arrangement such that borrowers can use the collection with ease.

Visitors have free access to the pictures in the collection and usually look over the pictures themselves and select the ones they wish. The person in charge is always ready to give assistance to any one who has difficulty in locating the material she wants.

All the pictures, then,—to continue the account of their arrange-

ment,—are arranged alphabetically by subject. The name of the subject is printed by hand, or stamped with small rubber type, in the upper left corner of the face of each mount, and on the outside of each folder. Permanent rubber stamps have been made for the subjects which are most used. As the pictures stand vertically in the boxes the names at the top are easily read.

As the collection is used largely by teachers we have appropriated for our headings a few of the terms which they frequently use in calling for pictures, such as "Forms of land and water," and "Races of man." The subject "Kindergarten" includes the pictures frequently asked for by kindergartners. The group "Portraits" includes not only pictures of people, but also of their homes, and of incidents connected with their lives, as borrowers usually inquire for this material in connection with the study of any person of note and it is convenient to find it all in one place. Historical pictures are in the main to be found under the names of countries, subdivided by period. Pictures of places are grouped by continent and then by individual country and city, except in the case of our own continent where we use the headings, United States, Mexico, etc. instead of grouping all under North America.

The arrangement of the pictures in each group is also alphabetic; for example, pictures of animals are arranged alphabetically by kinds of animals under the general heading animals, some of which are again subdivided by zones; copies of paintings are arranged alphabetically by artists' names under the general heading artist, the individual mounts being marked as follows:

Animals—Bear	Painters—Abbey
Animals—Buffalo	Painters—Bonheur
Animals—Camel	Painters—Corot

SUBJECT HEADINGS UNDER WHICH PICTURES ARE ARRANGED

The list requires some explanation. The headings are the result, as stated above, of the attempt to make accessible to the average person a file of pictures which index themselves. The subjects selected are many of them curious in form, and inconsistent with similar headings for other subjects. Our original intention was to use the standard A. L. A. subject headings; but out of local conditions and observation of the use of the collections by borrowers came these curious variations and inconsistencies. Perhaps we should add, in further justification of them, that they have proved most helpful in actual practice both in the Newark Library and in other libraries which have used them.

Abbeys	Amusements	Aquariums
English	Anchors	Arbor Day
French	Andirons	Arcades
Irish	Angels	Archery <i>see</i> Sports
Scottish	Angels	Architect
Abbeys	<i>See also</i> Painters—La	Architectural details
<i>See also</i> Cathedrals	Farge	Altar
Advertisements	Animals (Subdivided by	Arch
Africa	names of animals)	Balcony
Abyssinia	Extinct	Ceiling
Algeria	Frigid zone	Choir stall
Central	North Temperate zone	Cloister
Desert	South Temperate zone	Column
East	Torrid zone	Cornice
Egypt	<i>See also</i> Painters—Bon-	Court
Morocco	heur; Painters—Land-	Dome
South	seer; Painters—Jacques	Doorway
Tripoli	Antiquities	Gargoyle
Tunis	American	Gateway
West	Assyrian	Moulding
Agriculture	Babylonian	Pediment
Crop raising	Egyptian	Pergola
Airships	Greek	Porch
Alaska	Persian	Pulpit
Alms-houses	Roman	Roof
Alphabets—Engraved <i>see</i>	Scandinavian	Stairway
Lettering—Engraved	Syrian	

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|---|----------------------------------|---|
| Architectural details | Art | Asia |
| Tower and Spire | American | Tibet |
| Window | Arabian | Turkestan |
| Architectural styles | Assyrian | Turkey |
| American—Colonial | Austrian | Astronomy |
| Assyrian | Chinese | Asylums |
| Byzantine | Christian | Athletics <i>see</i> Games; Gym- |
| Chinese | Egyptian | nastics; Sports |
| Early Christian | English | Australia |
| Egyptian | French | Automobiles |
| Gothic <i>See also</i> Cathedrals | German | Autumn |
| Greek | Greek | Badges <i>see</i> Emblems |
| Corinthian | Indian | Baker |
| Doric | American | Bamboo |
| Ionic | East | Banks |
| Indian | Irish | Barber |
| Italian | Italian | Barns |
| Moorish | Japanese | Barracks <i>see</i> Armories |
| Norman | Persian | Baseball <i>see</i> Games |
| Primitive | Polish | Basketball <i>see</i> Games |
| Renaissance | Pompeian | Basketry |
| Rococo | Roman | Bathing <i>see</i> Sports |
| Roman | Russian | Bays <i>see</i> Forms of land and |
| Composite | Scandinavian | water |
| Corinthian | Spanish | Bead work |
| Doric | Turkish | Bee-keeping |
| Ionic | Art galleries <i>see</i> Museums | Bells |
| Tuscan | Artist | Bermuda <i>see</i> Islands |
| Romanesque | Asia | Bible (Subdivided by |
| Saracenic | Arabia | names of characters) |
| Swiss | Bhutan | Apocrypha |
| Transition | Burma | Ark and tabernacle |
| Architecture <i>see</i> Cathedrals; Churches; City halls; Club houses; Court houses | China | Babel |
| Armor | India | Christ (Arranged chronologically according to Stevens and Burton's harmony) |
| Armories | Japan | 1 Annunciation |
| Army | Korea | 2 Salutation |
| British | Malaysia | 3 Nativity, shepherds and magi |
| German | Palestine <i>see</i> Asia— | 4 Presentation in the temple |
| U. S. | Syria; Asia—Turkey | |
| | Persia | |
| | Siam | |
| | Siberia | |
| | Syria | |

Bible—Christ

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|---|---|--|
| 5 Flight into Egypt
and massacre of
the innocents | 29 Raising widow's
son at Nain | 52 Light of the
world |
| 6 Childhood of Jesus | 30 Anointing at
house of Simon
by Mary Magda-
lene | 53 Mission of seven-
ty |
| 7 Christ in the
temple | 31 Parable of sower | 54 Invitation "Come
unto me" |
| 8 Baptism of Jesus | 32 Wheat and tares | 55 Good Samaritan |
| 9 Temptation | 33 Mustard seed | 56 Visit to Martha
and Mary |
| 10 First miracle.
Marriage at Cana | 34 Hidden treasure | 57 Bartimeus and
man born blind |
| 11 Cleansing of
temple | 35 Last judgment | 58 Good Shepherd |
| 12 Discourse with
Nicodemus | 36 Goodly pearls | 59 Lord's prayer and
discourse on
prayer; Knock,
etc. |
| 13 Woman at Sama-
ria (at well) | 37 Net | 60 Consider the lilies |
| 14 Healing noble-
man's son | 38 Stilling the tempest | 61 Fig tree |
| 15 Preaching in syna-
gogue | 39 Gadarene demon-
iacs | 62 Woman healed on
Sabbath |
| 16 Miracle, draught
of fishes | 40 Raising Jairus's
daughter | 63 Grain of mustard
seed |
| 17 Call of the four;
Andrew, James,
John, Simon | 41 Woman touching
the hem of his
garment | 64 Leaven |
| 18 Casting out un-
clean spirit | 42 Two blind men
and dumb demon-
iac | 65 Christ weeping
over Jerusalem |
| 19 Healing Simon's
wife's mother | 43 Twelve sent on
mission | 66 Parable great sup-
per |
| 20 Healing leper | 44 Feeding five thou-
sand | 67 Ninety and nine |
| 21 Healing paralytic | 45 Jesus walking on
the water and
calling Peter | 68 Woman losing
silver pieces |
| 22 Call of Matthew | 46 Discourse on bread
of life | 69 Prodigal son |
| 23 Infirm man at pool
of Bethesda | 47 Miracles (not
otherwise noted) | 70 Unjust steward |
| 24 Disciples pluck-
ing grain | 48 Syrophoenician
woman | 71 Lazarus and rich
man |
| 25 Healing man with
withered hand | 49 Transfiguration | 72 Raising of Laz-
arus |
| 26 Choosing twelve | 50 Shekel in fish's
mouth | 73 Healing ten lepers |
| 27 Sermon on Mount | 51 Woman taken in
sin | 74 Importunate wi-
dow |
| 28 Healing centuri-
on's servant | | 75 Pharisee and pub-
lican |
| | | 76 Christ blessing
children |

Bible—Christ	103 Portraits of the Book	
77 Rich young ruler	Christ	Pamphlet
78 Laborers in vine- yard	104 Miscellaneous	Preface
79 Claims of James and John for high places	See also Painters— Rubens; Painters—Tissot	Title page
80 Blind man near Jericho	Deluge	Type face
81 Zacchaeus	Holy family	Bookbinding
82 Parable of pounds	Holy land	Ancient
83 Anointing of Christ by Mary	Prophets	Modern
84 Triumphal entry	Psalms	Book exhibit
85 Cursing fig tree	Revelations	Bookkeeper
86 Parables (not otherwise noted)	Temple	Bookplates
87 Vineyard (two sons)	Tissot—New Testament	Borax
88 Husbandmen	Tissot—Old Testament	Bottles
89 Marriage feast	Women of	Boy scouts
90 Tribute money	(Titles of Books of the Bible are not used, ex- cept Apocrypha,	Braziers
91 Widow's mite	Psalms and Revela- tions)	Brewing
92 Prophecy con- cerning Jerusalem	Bicycling see Sports	Bricklayer
93 Ten virgins	Biology	Bridge building
94 Talents	Bird cages	Bridges
95 Judas, conspiracy and repentance	Birds (Subdivided by names of birds)	Broadsides
96 Last supper and washing disciples feet	Eggs	Brooks see Forms of land and water
97 Gethsemane and arrest	Feathers	Brownies
98 Trials, flagel- lation, Peter's denial	Flying	Building construction
99 Crucifixion and burial	Game	Bungalows see Houses
100 Resurrection	Houses	Buoys
101 Appearance after resurrection	Nests	Business buildings
102 Ascension	Blacksmith	Butcher
	Blind	Cables see Telegraph
	Bluffs see Forms of land and water	Cacao see Cocoa
	Boat-houses	Cactus see Plants
	Boats see Navigation	Cameos
	Borneo	See also Gems
	Book	Camp Fire Girls
	Contents	Camping
	Covers	Canada
	Head and tail pieces	Glaciers
	Initial	Lakes and rivers
		Montreal
		Mountains
		Newfoundland
		Ottawa
		Quebec

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| Canals | Castles | Cemeteries |
| Winnipeg | Irish | See also Tombs |
| Eric | Italian | Centaurus |
| Panama | Portuguese | Central America |
| Sault Ste. Marie | Rumanian | Costa Rica |
| Suez | Scottish | Guatemala |
| See also Transportation | Spanish | Honduras |
| Candles | Swiss | Nicaragua |
| Candlesticks see Metalwork | Syrian | Salvador |
| Canoes see Navigation; | Turkish | Ceramics |
| Sports | Welsh | African |
| Canyons see Forms of land | See also Palaces | American |
| and water | Cathedrals | Colonial |
| Capes see Forms of land | African | Indian |
| and water | Bavarian | Marblehead |
| Caricatures | Belgian | Mexico |
| See also Cartoons | English (Subdivided by | Newcomb |
| Carnivals see Festivals | names of cathedrals) | Rookwood |
| Carpenter | French (Subdivided by | Tiffany |
| Cartoons | names) | Austrian |
| European war | German (Subdivided by | Chinese |
| Historic | names) | Danish |
| Newark | Irish | Design |
| Sports and games | Italian (Subdivided by | Bowl |
| Uncle Sam | names) | Child's set |
| Woman suffrage | Mexican | Coffee set |
| Carving | Russian | Cup and saucer |
| Ivory | Scottish | Fernery |
| Stone | Spanish | Jar |
| Wood | United States | Oatmeal set |
| Casinos | Welsh | Pepper and salt |
| Castles | See also Abbeys; Archi- | Pitcher |
| American | tectural styles—Gothic; | Plate |
| Austrian | Churches and names of | Stein |
| Bavarian | countries | Tea set |
| Danish | Cave dwellers | Vase |
| English (Subdivided by | Cave men see Cave dwellers | Dutch |
| names of castles) | Caves | Egyptian |
| French (Subdivided by | Celebrations see Exposi- | English |
| names) | tions; Fairs; Festivals; | French |
| German (Subdivided by | Pageants; and names of | German |
| names) | holidays | Greek and Roman |
| Indian, East | | Italian |

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| Ceramics | Church | City halls |
| Japanese | Customs | Spanish |
| Lead-glazed pottery | Decoration | United States |
| Maiolica | Furniture | See also names of coun-
tries |
| Moorish | Vestments | City planning |
| Persian | Churches | Advertisements |
| Salt-glazed stone-ware | Austrian | Birdseye views |
| Silicon | Belgian | Bridges |
| Tin enameled pottery | Canadian | Civic Art |
| Tools | Design | Architecture |
| See also Tiles | Dutch | Decoration |
| Charcoal | English | Destruction of natural
beauty |
| Charcoal drawing see
Drawing—Crayon | Foreign (Miscellaneous) | Fountains |
| Chariots | French | Groups of buildings and
skylines |
| See also Rome—History
—Manners and Cus-
toms | German | Landscape gardening |
| Chateaux see Castles | Irish | Lighting |
| Cherubs | Italian | Maps and plans |
| Child labor | Oriental | Monuments |
| Children | Russian | Parks and squares |
| See also Illustrators—
Greenaway; Illustra-
tors—Larsson; Illus-
trators—Smith, J. W. | Scandinavian | Playgrounds |
| Chimney sweeps | Scottish | Ports and water fronts |
| China see Ceramics | Spanish | Refuse disposal |
| China painting see Ceramics
—Design; Design—
Flower | Swiss | School gardens |
| Chivalry | Turkish | Sewage |
| See also Crusades; Eng-
land—History; France
—History; Painters—
Abbey | United States (Subdi-
vided by names of
states) | Special cities |
| Christmas | Welsh | Streets |
| Customs | See also Cathedrals | Transportation |
| Decoration | Cider | Trees |
| See also Bible—Christ;
Church decoration;
Design — Christmas;
Madonnas. | Circus | Water supply |
| | See also Costume—
Clown; Illustrators—
Parrish | Yards and gardens |
| | City halls | Clams see Shellfish |
| | Australian | Clay products |
| | British | Brick |
| | Design | Hollow tile |
| | Flemish | Terra cotta |
| | French | See also Ceramics |
| | German | Cliff dwellers |
| | Italian | Clocks |
| | | See also Watches |
| | | Clouds |

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| Club houses | Costa Rica see Central America | Costume | Indian |
| Coal | American | | See also Indians—Manners and customs. |
| See also Mining | Costume | | Indian, East |
| Coasting see Sports | Afghanistan | | Irish |
| Coats of Arms | African | | Italian |
| See also Heraldry; | American | | Japanese |
| Seals; Symbolic pictures | Colonial see also U. S. History—1602-1765—Colonization | | Javanese |
| Cobbler | Arabian | | Jester see Costume—Clown |
| Cocoa | Assyrian | | Jewish |
| Coffee | Arctic see Costume—Polar regions | | Korean |
| Coffee houses | Austrian | | Malaysian |
| Coins | Bakst | | Mediaeval |
| Ancient | Barbaric | | Mexican |
| English | Bible | | Military |
| German | See also Bible | | See also Army |
| Greek and Roman | Chinese | | Minstrel |
| Mint | Clown | | Naval see also Navy |
| Colleges | College | | Norwegian |
| British | Colonial see Costume—American—Colonial | | Nurse |
| Foreign | Design | | Page |
| French | Dutch | | Persian |
| German | See also Painters—Iraels | | Polar regions |
| Scandinavian | Ecclesiastical | | Polish |
| Swiss | See also Painters—Grutzner | | Portuguese |
| United States | Egyptian | | Renaissance |
| Color studies | English | | Roman |
| See also Landscapes—Colored; Painting—German; Illustrators—Parrish; Illustrators—Pyle; Illustrators—Remington | Fancy | | Rumanian |
| Colored supplements | Flemish | | Russian |
| Concrete | French | | Scotch |
| Convents | German | | Siamese |
| Cook | See also Painters—Vautier | | Spanish |
| Cooking see Domestic science | Gipsy | | See also Painters—Zuloaga |
| Copper | Greek | | Swedish |
| Coral | Head dress | | Swiss |
| Cork | Hungarian see Costume—Austrian | | See also Painters—Vautier |
| Corn | | | Tibetan see Costume—Chinese |

Costume	Design	Design
Turkish	Cartouche	Saracenic
Welsh	Celtic	Sea life
See also Races of man;	Chinese	Shell fish
Shoes	Christmas	Sicilian
Cottages see Houses—Ex-	Circle	Spanish
terior	Coptic	Square
Cotton	Corner	Stencils see Stencils
Court houses	Development	Surface
Courts—Law	Dragon	Tree
Cowboys see Western life	Egyptian	Tree—Conventionalized
Crematories	Etruscan	Tree—Leaf
Criminology	Figure	Turkish
Crosses	Fish	Viennese
Crowns	Flat see Design—Surface	Visiting card
Crucibles	Flower	Wall and ceiling
Crusades	Flower — Conventional-	Wall paper see Wall
Cuba	ized	papers
Currency	French	Devils
Customs house	Fruit	Dials
Cyclones	German	Diving
Dairies	Gothic	Docks see Wharves and
Dams	Greek	docks
Dances	Hungarian	Doctor
See also Painters—Bakst;	Indian, East	Domestic science
Painters—Besnard	Insect	Door fittings
Decoration day	Italian	Draperies
Denmark—History	Japanese	Drawing (Subdivided by
Desert see Forms of land	Menu card	names of authors of
and water	Middle Ages	sets)
Design (includes Dekora-	Moorish	Blackboard
tive Vorbilder)	Moresque	Brush
Animal	Northern	Crayon
Arabian	Oriental	Figure
Assyrian	Persian	Head
Astronomy	Plastic	Pen and ink
Bird	Pompeian	Pencil
Block printing	Primitive	School
Border	Renaissance	Dredges
Branch—Illustrated exer-	Rococo	Driving see Sports
cises	Roman	Drum-major
Byzantine	Rosette	Dwarfs
	Russian	Dyeing

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| Earthquakes | England—History | Engraving |
| Easter | 1399—1485 Lancaster— | Copper |
| Editor | York | Steel |
| Electricity | Henry IV | Engraving — Jewelry <i>see</i> |
| Elevators | Henry V | Lettering—Engraved |
| Emblems | Henry VI | Esparto |
| Enamels | Edward IV | Etching |
| Engineer | Edward V | Etchings |
| Engineering | Richard III | See also Painters — Le- |
| England | 1485—1603 Tudor | gros |
| Coronation | Henry VII | Europe (Countries subdivided by cities, provinces, etc.) |
| Government | Henry VIII | Albania |
| Parliament | Edward VI | Alps |
| England—History (Outline from Montgomery's English History) | Mary | Andorra |
| 1500 B. C.—55 B. C. | Elizabeth | Austria-Hungary |
| Prehistoric | 1603—1714 Stuart | Belgium |
| 55 B. C.—410 A. D. | James I | Bulgaria |
| Roman | Charles I | Danube |
| 449—1066 Saxon and Danish | Charles II | Denmark |
| Alfred the Great | James II | England |
| Sweyn | William and Mary | Channel Islands |
| Canute | Anne <i>see also</i> Coffee | Isle of Man |
| Edward the Confessor | houses | Isle of Wight |
| Harold | 1649—1660 Common- | Lake region |
| 1066—1154 Norman | wealth | Manners and customs |
| William I | Cromwell | Rural |
| William Rufus | 1714 Hanoverian | Thames |
| Henry I | George I | France |
| Stephen | George II | Manners and customs |
| 1154—1399 Plantagenet or Angevin | George III | Pyrenees |
| Henry II | George IV | Germany |
| Richard I | William IV | Black Forest |
| John | Victoria | Manners and customs |
| Henry III | Edward VII | Rhine |
| Edward I | George V | Greece |
| Edward II | 11th century, through to | Holland |
| Edward III | 18th century (Sets of | Manners and customs |
| Richard II | pictures published by | Ireland |
| | centuries are filed at | Giant's Causeway |
| | the end of the above | Killarney |
| | outline) | Manners and customs |
| | Engraver | |

Europe—Italy	Expositions	Flowers (Subdivided by names of flowers)
Lake Como	Alaska—Yukon 1909	Wild
Lake Maggiore	Brussels 1910	Football see Games
Manners and customs	Centennial 1876	Forestry
Sardinia	Columbian 1893	Conservation
Sicily	Jamestown 1907	Forms of land and water
Monaco	Lewis and Clark 1905	Bay
Montenegro	Louisiana Purchase 1904	Bluff
Norway	Milan 1906	Brook
Portugal	Panama-Pacific 1915	Canyon
Rumania	Pan-American 1901	Cape
Russia	Paris 1878	Desert
Finland	Paris 1900	Geyser
Manners and customs	Turin 1911	Glacier
Poland	Quebec 1908	Harbor
Scotland	Factories	Island
Lakes and rivers	Fairies	Isthmus
Manners and customs	Fairs	Lake
Servia	Family	Mountain
Spain	See also Painters—	Peninsula
Gibraltar	Bouguereau	Plain
Manners and customs	Fans	Plateau
Sweden	Farm buildings	Promontory
Switzerland	Farm life	Rapids
Alps	See also Painters—	River
Chillon	Boehle; Clausen; De-	Strait
Turkey	bat; Dupre; Ponsan	Valley
Manners and customs	Fauna	Waterfall
Wales	Fencing see Sports	Forts
Europe—War, 1914	Ferns see Plants	Fortune teller
Armament	Festivals	Fossils
Forts	Fire departments	Fountains
Land battles	Fireman	Fourth of July
Maps	Fish (Subdivided by names of fish)	France—History (Outline from Montgomery's French History)
Naval battles	Fisheries	597—58 B. C. Early
Places	Fishing	58 B. C.—481 A. D.
Portraits	See also Sports	Roman
Ships (air and naval)	Flag day	481—752 Merovingian
Soldiers	Flags	Clovis
Explorers (Subdivided by names of explorers)	Flax	Dagobert
Vikings	Floods	

France—History	1795—1799 Directory	Furniture—Georgian
752—987 Carolingian	1799—1804 Consulate	Chippendale
Pepin	Napoleon	Sheraton
Charlemagne	1804—1814 First Em-	Adam
987—1328 Capet	pire	Heppelwhite
Hugh Capet	Napoleon I	Flemish
Robert	1814—1848 Restored	French
Henry I	Bourbon	Renaissance
Philip I	Louis XVIII	Louis XIII
Louis VI	Charles X	Louis XIV
Louis VII	Louis Philippe	Louis XV
Philip Augustus	1848—1851 Second Re-	Louis XVI
Louis VIII	public	Empire
Louis IX	Louis Napoleon	Garden
Philip III	1851—1870 Second Em-	German
Philip the Fair	pire	Gothic
Louis X	Louis Napoleon	Italian
Philip V	1870—Third Republic	Mission
Charles the Fair	Thiers	Modern
1328—1589 Valois	MacMahon	Bedstead and cradle
Philip VI	Grevy	Bookcase and magazine
John the Good	Carnot	stand
Charles V	Casimir—Perier	Buffet and serving
Charles VI	Faure	table
Charles VII	Loubet	Bureau, dressing table
Louis XI	Fallieres	and chiffonier
1328—1589 Valois	Poincare	Cabinet
Charles VIII	Friezes	Chair
Louis XII	Fruit (Subdivided by names	Chest
Francis I	of fruits)	China closet
Henry II	Fruit growing (Subdivided	Clock see Clocks
Francis II	by names of fruits)	Clothes tree and hat
Charles IX	Methods	rack
Henry III	Fungi	Couch and sofa
1589—1789 Bourbon	Furniture	Desk
Henry IV	American—Colonial	Fire screen
Louis XIII	Craftsman	Flower box stand
Louis XIV	Danish	Nursery see Houses—
Louis XV	English	Interior
Louis XVI	Renaissance	Refrigerator
1789—1792 Revolution	Jacobean	Settle and settee
1792—1795 First Re-	Georgian	Sideboard and cup-
public		board

Furniture—Modern	Gardens	Germany—History
Suit	Italian	Philip
Table	Japanese	Otho IV
Tabouret and umbrella stand	Landscape	Frederick II
Tea wagon	Gas	Conrad IV
Towel rack	Gems	William of Holland
Wardrobe	See also Cameos	Richard of Cornwall
Washstand and commode	Germany—History	1271—1347 Hapsburg
Waste basket	(Outline from Ploetz's Epitome of Universal History)	Rudolf I
Window box	600 B. C.—12 B. C.	Adolf
Porch	Early	Albert I
Rococo	Germany—History	Henry VII
Spanish	12 B. C.—16 A. D.	Ludovic V
Willow	Roman	1347—1437 Luxemburg-Bohemian
Furs	16—481 Wandering of the Nations	Charles IV
Games	481—911 Frankish	Wenceslas
Baseball	Charlemagne	Robert
Basketball	Lothaire I	Sigismund
Battledoor and shuttlecock	Charles the Bold	1437—1519 Hapsburg, continued
Billiards	Charles the Fat	Albert II
Blindman's buff	Arnulf	Frederick III
Bowling	Louis IV	Maximilian I
Checkers	911—1138 Saxon and Franconian	1519—1553 Reformation (Hapsburg)
Cricket	Conrad I	Charles V
Croquet	Henry I	1553—1618 Hapsburg, continued
Curling	Otho I	Ferdinand I
Football	Otho II	Maximilian II
Golf	Otho III	Rudolph II
Hockey	Henry II	Matthias
Leap frog	Conrad II	1618—1648 Thirty Years War (Hapsburg)
Marbles	Henry III	Ferdinand II
Olympic	Henry IV	Ferdinand III
Ping Pong	Henry V	1648—1871 Hapsburg, continued
Polo	Lothaire II	Leopold I
Roulette	1138—1271 Hohenstaufen or Suabian	Joseph I
Stilts	Conrad III	Charles VI
Tennis	Frederick I	Francis I
Garages	Henry VI	
Gardening		

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|-----------------------------------|---------------------------|----------------------------|
| Germany—History | Greece—History | Heating |
| Joseph II | 500—479 B. C. Persian | Heliotypes |
| Leopold II | Wars | Hemp |
| Francis II | 479—431 B. C. Athenian | Heraldry |
| Ferdinand I | Supremacy | See also Coats of arms |
| Francis Joseph I | Pericles | Heroism |
| 1871—Hohenzollern | 431—359 B. C. Decline | Hockey see Sports |
| William I | of Empire | Honduras see Central |
| Frederich III | Peloponnesian War | America |
| William II | 359—229 B. C. Union | Hops |
| Geysers see Forms of land | with Orient | Hospitals |
| and water | Philip of Macedon | Exterior |
| Ghosts | Alexander the Great | Interior |
| Giants | 229—146 B. C. Union | Plans |
| Glaciers see Forms of land | with Occident | Hotels |
| and water | Absorption by Rome | American |
| Glass | Manners and customs | English |
| Manufacture | Modern | Foreign |
| Glassblower | Green-houses | House boats see Navigation |
| Goblins | Greenland | House painting |
| Gold see Metalwork; Min- | Grindstones | Household science see |
| ing—Gold | Grotesques | Domestic science |
| Golf see Games | Guadeloupe see Islands— | Houses—Exterior |
| Government—Foreign | West Indies | Apartment |
| Grain elevators see | Guam see Islands | Bungalow |
| Elevators | Guatemala see Central | Cement |
| Grains and grasses | America | Colonial |
| Granite see Quarrying | Guns | Cottage |
| Graves see Cemeteries; Gymnasiums | Gymnastics | Country |
| Sculpture—Greek and | Habitation—History of | Craftsman |
| Roman—Grave monu- | Haiti see Islands—West | English |
| ments; Tombs | Indies | English cottage |
| Greece—History (From | Half-tone | English manor |
| Morey's Outlines of | Colored | Farm |
| Greek History) | Hallowe'en | German |
| —776 B. C. Prehistoric | Hammocks | Historic |
| Trojan War | Harbors see Forms of land | Log |
| Homer | and water | Mansion |
| 776—500 B. C. Early | Harvest | Mission |
| Sparta | Hatter | Moderate cost |
| Athens | Hats | Plans |
| Colonies | Hawaii | Rows |
| | | Two family |

Houses—Interior	Illustrations	Islands
Attic	Opera	Java
Ball room	Songs	New Zealand
Bath room	Songs—German	Philippines
Bedroom	See also Painters—Abbey	Porto Rico
Billiard room	Illustrators (Subdivided by	Ceylon see Asia—India
Boudoir	names of illustrators)	Sicily see Europe—Italy
Color scheme	Immigration	See also Forms of land
Conservatory	Indians	and water
Decoration	Dwellings	Isle of Pines see Islands—
Dining room	Manners and customs	West Indies
Doorway	Schools	Isthmus see Forms of land
Drawing room	Useful arts	and water
Fireplace	Industries see under speci-	Italy—History
Hall and stairway	fic name Lumbering, etc.	Ivory
Historic	Inns	Ivory carving see Carving
Kitchen	Insects (Subdivided by	—Ivory
Laundry	names of insects)	Jamaica
Library	Cicada see Insects—Lo-	Janitor
Living room	cust	Japanese prints
Music room	Injurious	Java
Nursery	Protective mimicry	Jewelry
Reception room	Intarsia	Historic
Studios see Studios	Ireland—History	African
Sun parlor	Iron see Steel and iron	Arabian
Vista	Iron moulder	Byzantine
Window	Irrigation	Celtic
Humane societies see Kind-	Islands (Subdivided by	Chinese
ness to animals	names of islands)	Dutch
Hunting see Sports	West Indies (Subdivided	Egyptian
Hygiene	by names of islands in	Etruscan
Hypnotism	this group)	Gallic
Ice	The following islands are	German
Ice boats	filed under their names	Gothic
Iceland	instead of under Is-	Greek
Idols	lands because of their	Indian, East
Illumination	importance or the	Italian
Illustrations (Pictures illus-	amount of material:	Japanese
trating drama, poetry and	Cuba	Northern European
literature in general, filed	Greenland	Persian
by author)	Hawaii	Portuguese
Fairy tales	Iceland	Renaissance
Nursery rhymes	Jamaica	Roman

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| Jewelry—Historic | [Landscapes] | Libraries |
| Russian | stable; Painters— | United States (Subdi- |
| Trojan | Corot; Painters— | vided by names of |
| Turkestan | Waterlow | states) |
| Turkish | Landscape gardening see | Life saving |
| 17th century | Gardens | Life saving stations |
| 18th century | Language | Lighthouses |
| 19th century | Law courts see Courts | Lightning |
| Modern | See also Painters— | Lineman |
| Manufacture | Adan; Painters—Bas- | Liquid air |
| Bag | tien Lepage; Painters | Liquor traffic |
| Bracelet and earring | —Breton | Lithography |
| Buckle | Lawyer | Lizards see Reptiles |
| Cuff button | Leather | Lobsters see Shell fish |
| Diadem | Leather work | Lodges |
| Hair ornament—Comb | Leaves see Trees | Lumbering |
| Hair ornament—Pin | Lettering | Lumberman |
| Hat pin | Block | Macaroni |
| Lorgnette | Composition | Machinery |
| Necklace and pendant | Egyptian | Machinist |
| Pin | Engraved | Madonnas |
| Ring | Fancy | Magazine covers |
| Jewelry—Engraving see | German | Mail see Post-office |
| Lettering—Engraving | Gothic | Malta see Islands |
| Jungle | Initial | Manual training see Schools |
| Keramics see Ceramics | Monogram | —Technical and Profes- |
| Kindergarten | Roman | sional |
| Froebel—Mother play | Block | Manuscripts — Illuminated |
| Paper cutting | Script | see Illumination |
| Kindness to animals (Sub- | Show card | Maple sugar see Sugar |
| divided by names of ani- | Libraries | Maps |
| mals) | Ancient | Historic |
| Kites | Australian | Modern |
| Labor | Canadian | Outline |
| Lace | English | Physical |
| Lake dwellers | Foreign | Transportation |
| Lakes see Forms of land | French | Marble |
| and water | German | See also Quarrying |
| Lamps | Italian | Marine studies |
| Lampshades | Russian | See also Painters— |
| Landscapes | South American | Homer |
| See also Painters—Con- | | Marionettes |
| | | Markets |

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| Martinique see Islands — | Moss | Navigation |
| West Indies | Motorman | House-boat |
| Masks | Mountain climbing see | Sailing-vessel |
| Mason | Sports | Steamship |
| May day | Mountains see Forms of | Warship |
| Meat | land and water | Navy |
| Medals | Moving pictures | English |
| Memorial day see Decora- | Municipal art see City | Foreign |
| tion day | planning | German |
| Merchant | Mural painting see Paint- | Japanese |
| Mermaids | ing—Mural | Russian |
| Metal work | Museums | United States |
| Brass and copper | Altman collection | Battleship |
| Bronze | Design | Crew |
| Design | Dutch | Cruiser |
| Ecclesiastical | Egyptian | Gunboat |
| Pewter | English | Monitor |
| Silver and gold | Exhibits | Portraits |
| Wrought iron | German | Submarine |
| Mexico | Hungarian | Torpedo |
| Mexico—History | Italian | Needlework |
| Mezzotints | Morgan collection | Applique |
| Microscopy | Russian | Bag |
| Miller | Spanish | Christmas |
| Mills | Swedish | Church |
| Miner | United States | Crochet |
| Minerals | Musical instruments | Cross-stitch |
| Miniatures | Musicians | Curtain see Draperies |
| Mining | Mussels see Shell fish | Embroidery |
| Coal | Mythology | Lettering |
| Copper | Celtic | Pillow cover |
| Diamond | Egyptian | Quilt and bedspread |
| Gold | German see Norse and | Sampler |
| Mirages | German | Table cover |
| Mirrors | Greek and Roman | Negroes |
| Missions (Both architec- | Norse and German | New England village life |
| ture and religion in- | Persian | New Year |
| cluded under this head) | Roman see Greek and | New Zealand |
| Monasteries | Roman | Newark |
| Monuments | Navigation | Advertisements |
| Mormons | Boat | Almshouses |
| Mosaics | Canoe | Asylums and homes |
| Mosques | Historic ship | Birdseye views |

Newark	Newark—Public Buildings	Pacific Islands see Islands
Board of Health	Insurance	—Pacific
Bridges	Jail	Pageants
Canals	Library	Painter
Celebrations	Post Office	Painters (Subdivided by names of painters)
Cemeteries	Railroad stations	Painting
Churches	Schools	American collections
City planning	Sculpture (Subdivided by name of sculptor and title of statue)	Cubist
Clubhouses	Sewage	Dutch
Fire department	Stained glass	English
Geology	Stores	French
Government	Streets	German
Historic houses	Tablets	Japanese
Historical	Theaters and halls	Metropolitan Museum
Homes	Transportation	Mural
Hospitals	Trees	Mural—American see also Painters—Alexander; Painters—Blashfield; Painters—Cox; Painters—La Farge
Industries	Water supply	Russian
Lighting	Newsboys	Scandinavian
Maps	Newspapers	Secessionist
Medals	Nicaragua see Central America	Spanish
Mosquito campaign	Night	Palaces
Museum Association—Exhibits	Nude in art	English
Newark Bay	Medals	French
Newspapers	Nursing	German
Painting (Subdivided by name of artist and title of picture)	Nuts	Italian
Parks	Observatories	See also Castles
Parochial schools and convents	Ocean	Palms see Plants—Palm; Trees—Palm
Passaic River	See also Painters—Waugh	Pan see Fauns
Playgrounds	Offices	Panama
Police department	Oil	Panels
Portraits (Subdivided by name of person)	Oil painting studies see Color studies	Paper
Poster	Olympic games see Games—Olympic	Paper making
Public buildings	Opera houses	Passion Play
Armory	Organ see Musical instruments	Peace see Symbolic pictures—War and peace
Banks	Organ grinder	Pearl fishing
Baths		
City Hall		
Court House		

Peat	Portraits	Portraits—Royalty
Peninsulas see Forms of land and water	some instances it may be advisable to file groups under subject, <i>i. e.</i> Baseball managers under Games — Baseball.	Norwegian
Philippines	In case of small portrait groups, which cannot be divided, file under the name of one person.	Portuguese
Photo-engraving	Governors	Rumanian
Photographer	Journalists	Russian
Photography	Librarians	Servian
Photogravures	Mothers of famous men	Spanish
Physiology	Musicians	Swedish
Pianos see Musical instruments	New Jersey	Turkish
Pilot	New York Stock Exchange	Portugal—History
Pipes	Presidents	Post office
Pirates	Wilson (President)	Post offices
Plains see Forms of land and water	Administration	Postage stamps
Plants (Subdivided by names of plants)	Inauguration	Poster stamps
Plateaus see Forms of land and water	<i>Note:</i> Subdivisions used for president when in office for convenience in filing.	Posters
Playhouses	Royalty	Postman
Ploughing	African	Potter
Plumber	Asian	Pottery see Ceramics
Poland—History	Austrian	Poultry
Polar regions	Belgian	Chicken
Police departments	Bulgarian	Duck
Police stations	Danish	Goose
Policeman	Dutch	Grouse
Politics	English	Guinea hen
Polo see Games	French	Turkey
Porcelain see Ceramics	German	Printer
Porcelains	Greek	Printing
Porches see Architectural details; Furniture—Porch	Italian	Prisons
Porto Rico	Montenegrin	Promontories see Forms of land and water
Portraits (Subdivided by names of persons)		Public baths
General		Publishing houses
<i>Note</i> —Use only when large portrait groups cannot be cut out and portraits filed individually. In		Athenaeum Press
		Curtis
		Punishments
		Pure food
		Pyrography
		Quarrying
		Quinine see Plants
		Races of man (Subdivided into geographic groups)
		Black
		Prehistoric

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|---|------------------------------------|--|
| Races of man | Rome—History | Roof gardens |
| Red | Tarquinius Priscus | Rope |
| White | Servius Tullius | Rowing see Sports |
| Yellow | Tarquinius Superbus | Rubber |
| Racing see Sports | 510—31 B. C. Republic | Rugs |
| Radium | Early (510—343 B. C.) | Ruins |
| Railroads | Conquest of Italy (343—264 B. C.) | Abyssinian |
| Elevated | Conquest of Mediterranean World | American |
| Signals | Punic wars (264—133 B. C.) | Cliff dwellings |
| Stations | Julius Caesar | Mounds |
| Subway | Decline of Republic (133—31 B. C.) | Egyptian |
| Rain | Julius Caesar | English |
| Rainbow | 31 B. C.—476 A. D. Empire | Greek |
| Ranch see Western life | Early (31 B. C.—284 A. D.) | Roman |
| Rapids see Forms of land and water | Augustus Caesar | Welsh |
| Red cross | Julian Emperors | Yucatan |
| Reflectoscope | Tiberius | Russia |
| Reptiles | Caligula | History |
| Crocodile | Claudius | Crimean war |
| Lizard | Nero | Russo-Japanese war |
| Snake | Flavian Emperors | |
| Restaurants | Vespasian | Sailing see Sports |
| Rice | Titus | Sailors |
| Riding see Sports | Domitian | St. Thomas see Islands— |
| Rivers see Forms of land and water | Five Good Emperors | West Indies |
| Roads | Nero | St. Vincent see Islands— |
| Rocks | Trajan | West Indies |
| Roentgen rays see X-ray | Hadrian | Saints (Subdivided by names of saints) |
| Roller-skating see Sports | Antoninus Pius | Salt |
| Rome—History (From Morey's Outlines of Roman History) | Marcus Aurelius | Salvation Army |
| 754—510 B. C. Kingdom | Decline of Empire (284—476) | Sand |
| Early kings (753—616 B. C.) | Constantine | Sandwich Islands see Islands—Sandwich |
| Romulus | Manners and customs | Schools |
| Numa Pompilius | See also Painters — | Art and music |
| Tullus Hostilius | Gerome | British |
| Ancus Marcius | | Children in school |
| Etruscan kings (616—510 B. C.) | | Foreign |
| | | Kindergarten |
| | | Military |
| | | Music see Schools—Art and Music |
| | | New Jersey |

Schools	[Sculpture]	Snuff boxes
Private	hero or by name of	Social settlement
Professional see Schools	title, if familiar.	South America
—Technical and Professional	Sea life	Andes
Public	Sea walls	Argentine
Exterior with plans	Sea weed	Bolivia
Interior	Seals	Brazil
Rural	City	Chili
Special	College	Colombia
Technical and Professional	State	Ecuador
	See also Coats of arms	Guiana
Screens	Searchlights	Incas
	Seeds	Llanos
Sculptors (Subdivided by names of sculptors)	Settlement work see Social settlement	Pampas
Sculpture (Subdivided by names of sculptures)	Seven wonders of the world	Paraguay
Greek and Roman	Ancient	People
(Classification of University Prints)	Mediaeval	Peru
Archaic 625—480 B. C.	Sewers	Rivers
C.	Shadow pictures see Silhouettes	Selvas
Transitional 480—450 B. C.	Shale	Uruguay
Great 450—380 B. C.	Shell fish	Venezuela
Praxiteles, Period of 380—323 B. C.	Shells	Spain—History
Hellenistic 323—30 B. C.	Ship-building	Spectrum
C.	Ships see Navigation	Spices see Plants
Roman—1st century B. C.—4th century A. D.	Shipwrecks	Spiders
Grave monuments	Shoemaker see Cobbler	Spinning and weaving
Parthenon	Shoes	Sponges
Portraits	Shops—Interior	Sports
Processes	Sign painting	Archery
Secessionist	Signboards	Bathing
Note—Copies of sculpture of all periods have been subdivided by Roman name of god, by name of	Silhouettes	Bicycling
	Silk	Canoeing
	Skating see Sports	Coasting
	Skeeing see Sports	Driving
	Skeletons	Fencing
	Skylines	Fishing
	Slavery	Hockey
	Sleeping porches	Hunting
	Smugglers	Mountain climbing
	Snake charmers	Racing
	Snow crystals	Riding
		Roller-skating
		Rowing

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|-----------------------------------|-------------------------------|-----------------------|
| Sports | Sunset | Symbolic pictures |
| Sailing | Surveying | Commerce |
| Skating | Sweden—History | Commerce—Military |
| Skeeing | Swimming <i>see</i> Sports | Science |
| Swimming | Swimming pools | Communication |
| Winter | Switzerland—History | Countries |
| Wrestling | Symbolic pictures | Courage |
| Spring | (The following headings | Dances |
| Stables | are taken from head- | Death |
| Stage | ings of plates in Dekor- | Dedication |
| Stage coaches | ative Vorbilder and in | Drama |
| Stained glass | Allegorien und Em- | Drink |
| Stamps | bleme pub. by Gerlach | Earth |
| State houses | & Schenk. They serve | Electricity |
| Stations <i>see</i> Railroad sta- | as a guide only in | Electricity—Mechanics |
| tions | classifying miscel- | Elements |
| Statues <i>see</i> Monuments; | laneous clippings) | Emotions |
| Sculptors | Abundance | Faith |
| Steel and Iron | Agriculture | Fame |
| Stencils | Alphabet | Fanaticism |
| Still life | Architecture | Fate |
| Stock raising | Art | Faun |
| Stone carving <i>see</i> Carving— | Art—Fame | Friezes |
| Stone | Art—Plastic | Gardening |
| Stores | Art—Science | Gardening—Shepherdess |
| Storms | Astronomy | Geography |
| Straits <i>see</i> Forms of land | Astronomy—Geography | Geology—Zoology |
| and water | Avarice | Goldsmith |
| Strikes | Beauty | Government |
| Studios | Beauty—Victory | Happiness |
| Suffrage <i>see</i> Woman suf- | Calendar—Day | Harmony |
| frage | Calendar—Week | Harvest |
| Sugar | Symbolic pictures | Head and tail pieces |
| Beet | Calendar—Month | Health |
| Cane | Calendar—New Year | Heaven |
| Maple | Calendar—Seasons | Hell |
| Sumatra <i>see</i> Islands | Carnival | Heraldry |
| Summer | Ceramics | History |
| Summer houses | Charity | Hope—Love |
| Sunday supplements <i>see</i> | Church | Housewife—Vigilance |
| Colored supplements | Cities | Idyl |
| Sun dials <i>see</i> Dials | Coats of arms | Industries |
| Sunrise | <i>See also</i> Coats of arms | Industry |

- Symbolic pictures
 Justice
 Law
 Liberty—Tyranny
 Life—Childhood
 Life—Old Age
 Life—Youth
 Literature
 Love
 Love—Pleasure
 Magnetism
 Medicine
 Melancholy
 Memorial
 Menu
 Mercy
 Mineralogy—Botany
 Muses
 Music—Love
 Music—Wine
 Mythology
 Nature
 Navigation
 Painting
 Painting—Sculpture
 Philosophy
 Play
 Poetry
 Poetry—Prose
 Printing
 Printing—Metallurgy
 Progress
 Prose
 Purity
 Religion—Islamism
 Religion — Judaism — Christianity
 Religion — Brahmanism — Buddhism
 Satire—Wit
 Science
 Senses
 Sensuality
- Silence—Speech
 Sleep
 Society
 Song
 Sports—Hunting
 Sports — Hunting—Fish-
 ing
 Sports—Racing
 Stage
 Steam power
 Steam power—Electricity
 Temperaments
 Temptation
 Time
 Tinsmith
 Trades
 Truth—Lie
 Utility—Charm
 Vanity
 Virtue
 War and peace
 Wine
 Wine—Beer
 Wine—Chocolate
 Wisdom—Stupidity
 Woodcut—Engraving
- Table decoration
 Tablets
 Commercial
 Memorial
 Tailor
 Tanner
 Tapestries
 Tea
 Teacher
 Teamster
 Telegraph
 Telephone
 Temples
 Assyrian
 Babylonian
 Chinese
- Temples
 Egyptian
 Greek
 Indian, East
 Japanese
 Roman
 Tenements *see* Social settle-
 ment
 Tennis *see* Games
 Textiles
 Scotch plaids
 Thanksgiving
 Theaters
 Tiles
 See also Ceramics
 Tinsmith
 Toads and frogs
 Tobacco
 Tombs
 See also Cemeteries;
 Sculpture—Greek and
 Roman—Grave monu-
 ments
 Tools
 Totem poles
 Towers *see* Architectural
 details—Tower and spire
 Toys
 Trades
 See set of 50 pictures il-
 lustrating trades and
 professions filed under
 specific name—
 Artist
 Trades
 Baker
 Barber, etc.
 Tramp
 Transportation—Historical
 Trays
 Trees (Subdivided by
 names of trees)
 Blossoms

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| Trees | U. S. History | Waterfalls see Forms of |
| Evergreen | (Outline from Montgomery's American History) | land and water |
| General | | Water color studies see Color studies |
| Historic | | |
| Leaf | 1000—1509 Discovery | Water supply |
| Trolleys | 1509—1602 Exploration | Weapons |
| Tuberculosis | 1602—1765 Colonization | Weather |
| Tunnels | Pre-Revolutionary wars | Weather vanes |
| Turkey—History | 1765—1788 Revolution | Weaver |
| Turpentine | and Constitution | Weaving see Spinning and weaving |
| Turtles | 1789—1860 Union and development | Wells |
| Uniforms see Costume— | | West Indies see Islands |
| Military; Costume— | 1861—1865 Civil war | Western life |
| Naval; Costume—Nurse | 1865—1898 Reconstruction | Whaling |
| United States (Subdivided by names of states and principal cities) | 1898—1899 Spanish-American war | Wharves and docks |
| Coast line | 1899— | Wheat |
| Glacier National Park | Valentines | Wind |
| Government | Valleys see Forms of land and water | Windmills |
| Congress | Vanilla see Plants Vanilla | Winter |
| Conventions | Vases see Ceramics—Design | Wireless |
| Elections | Vegetables (Subdivided by names of vegetables) | Witches |
| Inauguration | Vignettes | Woman suffrage |
| Supreme Court | Vines | Wood |
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The Information File
Subject Headings

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Edited by John Cotton Dana

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By John Cotton Dana

List of Subject Headings for Information File

With Introduction and a List which supplements the Information File, of 119 Important Reference Books containing Current Information.

Compiled by

Mabel E. Colegrove and Margaret A. McVety

Published by
The Elm Tree Press, Woodstock, Vermont
1917

The Information File: Subject Headings

PREFACE

This is the list of subject headings under which material is arranged in our Information File. A description of the file itself, of our methods of using it and of the rules we worked out for treatment of material placed in it was published two years ago, 1915, under the title Vertical File. We have changed its name to Information File as conveying a better idea of its character and purpose. Few changes, and none of importance, have been made in the rules laid down in the pamphlet alluded to.

In April, 1914, we printed for our own use, in a very small edition, a list of all the subject headings for the File which had been adopted up to that time. For this list we had many calls from librarians and others. Since it was printed it has been greatly modified in many ways. It now includes not more than 3,500 main entries. It is desirable that the number of entries be kept small. The list changes every day, of course. New subjects are added and old ones dropped or sub-divided. The steady stream of leaflets, pamphlets, clippings, notices and letters grows constantly in size and daily extends the range of the File.

Requests continue to come in for this list of our headings, selected during four years of daily contact with the task of classifying, under appropriate subjects, the printed matter of every kind on the topics that are to-day most often in men's minds; a task made more difficult by the fact that these headings form the only index we have of a vast amount of information which is constantly called for. Partly to meet these requests and partly to aid us in our own work we have here printed the list, as of June 1, 1917. Thus printed it will very greatly shorten the labor of assigning to their proper places the many items in each day's flood of material. Other libraries will find it useful in several ways, so we conclude

from letters and inquiries concerning it. Perhaps it is more truly a list of the things the world is now doing and saying and of the things of which it is now thinking than is any other now in print; though it includes, of course, many entries on local affairs which would not appear in a list of the works and thoughts of the world at large.

Wherever conditions warrant, headings are selected from indexes already in print. Often, in this way, information of local interest is filed under certain forms of entry that are locally well known, through indexes of city and state manuals and indexes to laws and ordinances, though technically less desirable. Thus we make it easy to pass from these indexes to the Information File and vice versa. Much information, however, finds its way to the file almost as soon as it appears in print and therefore too soon for us to compare forms of headings with those of other indexes. This fact makes our list of interest to professional indexers and from them we receive frequent inquiries on points of selection of headings.

Miss McVety, who has charge at the main library of all our work in the reference field, save that which has to do with "business," technology, art and the sciences, makes the very definite claim that no book, no group of books, no group of indexes, and even no group of dictionaries and encyclopedias is more valuable as an aid in the library's daily task of answering inquiries than is the Information File. Our reasons for believing that this would be true of a library tool of this kind, once it were extended to fair proportions, were given in the pamphlet called *The Vertical File*, already mentioned. It is not necessary to restate them here. In outline they are, that the printing press now catches at once much of what is thought and said and done each day, and almost before each day reaches its close; that man is slowly learning, and particularly is the man of affairs learning, that he chiefly needs, for guidance in his work, what was thought and said and done yesterday; that this which he needs has rarely reached book form

by the time he wants it; and that the journals, pamphlets and clippings in which the printing press has placed it are more readily, quickly and cheaply put at his command by means of a device of the nature of the Information File than by any other we have yet discovered.

Several thousand organizations have been established in recent years to investigate or to improve existing social conditions. They issue single sheets, booklets and pamphlets, individually and in series, and many of these find their place in our Information File. It seems that no complete list of these organizations is in existence. We compiled a list of several hundred with much labor a few years ago, and printed it for the N. J. Library Association under the title "Social Questions." We revised and enlarged this list, in 1914, and it was published by the H. W. Wilson Company in 1915. It included over 500 societies and was accompanied by a list of more than 400 topics on which these societies issued publications. We refer to this subject here because the names of these societies are not included in our list of Subject Headings, and also because the Information File is supplemented in many ways by them. Our printed list has not been kept to date since the establishment of the Index of Public Affairs Information Service. With the continued improvement of this service, we hope for a cumulative list of societies in classified form as a natural outgrowth of its work.

The main information file in the lending department, once begun, grew rapidly—it now occupies 60 trays, holding from 4,000 to 4,500 folders—and one department after another adopted a file of its own as a necessity, so that choice of subject headings and uniformity of headings soon became a burning question. The official list of headings accordingly was printed in 1914, and the revision of headings and assigning of new headings was then placed in the hands of Mrs. Colegrove, general adviser and supervisor of the ten information files in the system.

No single file in a department of the library contains items under

all the headings listed; as far as possible all technical and scientific subjects are limited to the file in the technical department; all art subjects are limited to the art department file; and other special subjects are limited to the files of the departments specializing in those subjects. Additional cross-references are constantly being made to facilitate the use of available material and thus to make the information in each department more easily accessible to the others. This work of harmonizing the ten files of ten different departments is still far from complete. With large files and pressure of other work it necessarily progresses slowly.

One of the labor-saving devices adopted since the first printing of the official list, is the grouping of most biographical material under the heading: "Biography, A—Z." It is divided among so many folders that the alphabetic arrangement in each folder is easily maintained, and any required item is quickly found. This saves file space, waste of folders and time in making frequent changes in the list of headings. The same principle is applied to catalogs, price lists, programs and other constantly changing groups, with a chronological or numerical arrangement when preferable.

A supplement to the Information File is a device called the "colored band filing method." This is based on the application to material to be filed of narrow strips of paper of different colors. These strips, by their colors and by their positions, are the guides by which pamphlets, maps, directories and other miscellaneous matter are kept in order. Keys to the arrangement are prepared, and by these the strips are applied, and by them any needed pamphlets are found.

The kinds of material which may be so filed are (1) publications which are so thick that the expense of providing vertical file drawers to hold them would be very great, and so ephemeral in their nature that the expense of classifying and marking them with classification numbers to make them available during their period of use is quite unwarranted; (2) those which are so large

or of such a shape that they will not go into vertical file drawers; (3) maps and broadsides that must hang on hooks, or stand on shelves with edges only exposed, to save storage space; and (4) all other material to which it is clearly not economical to give classification numbers. That is, this method classifies and arranges automatically, by the use of a key and pieces of colored paper, a mass of information of temporary value, in odd sizes and shapes, with no expensive apparatus and with the minimum of labor. A pamphlet in this series about to be issued, "Filing System by Colored Bands," illustrated with diagrams in color, explains how to adapt this method to material of many kinds.

J. C. D.

Supplementary Publications

A list of a few important sources of information on current topics constantly used prices are for latest available editions and are subject to change.

Agricultural Index. H. W. Wilson Co., White Plains, N. Y. Consult pub. for price. Subject index, on plan of Industrial Arts Index, to 200 agricultural serials. Cumulative; 5 times a year.

Almanach Hachette. Hachette & Cie., Paris. 70c. Handbook of practical information for the French household. Annual.

American Art Annual. American Federation of Arts, Wash., D. C. \$5. Who's who in art, art dealers, art schools, museums, craftsmen, art sales, etc.

American Exporter's Export Trade Directory. American Exporter, N. Y. \$3. Foreign buying agencies, export commission houses and agents in principal U. S. ports with lists of foreign exchange banks, marine insurance companies and shipping lines.

American Jewish Year Book. Jewish Publication Society of America, Phila. \$1. Activities of Jews throughout the world.

American Labor Year Book. Rand School of Social Science, N. Y. \$1. Paper, 50c. Chronicle of aims, struggles and achievements of labor throughout the world. Annual.

American Library Annual. Bowker, N. Y. \$5. Notes of library activities, bibliographies, statistics of book production, etc.

A. L. A. Booklist. A. L. A., Chic. \$1. Annotated lists of new books. Monthly except Aug. and Sept.

American Prohibition Year Book. Prohibition Nat'l Committee, Chic. Selected articles and statistics.

American Statesman's Year Book. McBride, N. Y. \$4. General and statistical information from official sources. Pt. 1, The U. S. as a whole and also by states. Pt. 2, Foreign countries. Pt. 3, Records and statistics.

American Whitaker Almanac and Encyclopedia. Macm., N. Y. \$1. General and statistical information about U. S. as a whole and each state individually. Brief but comprehensive survey of every foreign country.

American Year Book. Appleton, N. Y. \$3. Well-indexed classified record of politics, government, economics, science, art, religion and education in U. S.

Anglo-Canadian Year Book. Wm. Stevens, Lond. 5/. Information about Canada for residents of British Isles actively concerned with the Dominion.

Annual Magazine Subject Index and Dramatic Index. Boston Book Co., Bost. \$8.50. Includes less common American and English periodicals, society publications, theatrical and musical magazines not indexed elsewhere.

Annual Register. Longmans, Lond. 21/. Review of public events in England and foreign countries.

Anthology of Magazine Verse, ed. by W. S. Braithwaite. Gomme & Marshall, N. Y. \$1.50. Poems by American poets. Annual.

Anti-Prohibition Manual. Nat'l Wholesale Liquor Dealers' Assoc. of America, Cincinnati. Free. Summary of facts and figures dealing with prohibition. Annual.

Anti-Saloon League Year Book. Anti-Saloon League of America, Westerville, Ohio. 60c. Paper, 35c. Statistics of liquor traffic and temperance reform.

Argentine Year Book. Robert Grant & Co., Buenos Aires. \$5. Historical, geographical, commercial and financial; short chapters on republics of Uruguay, Paraguay and Chile.

Automobile Blue Book. Automobile Blue Book Pub. Co., N. Y. 8v. \$3 ea. Road guide for motorists touring the U. S.

Ayer & Sons American Newspaper Annual and Directory. Phila. \$10. All periodicals in U. S. and its possessions, Canada, Cuba and the West Indies with information respecting transportation facilities, banks, industries, etc., of places of publication.

Bankers' Register. Credit Co., Chic. \$7. Directory of banks and bank officers in U. S. and foreign countries with digest of federal and State banking laws.

Book of the Camp Fire Girls. Nat'l Headquarters, N. Y. 25c. Member's handbook giving schedule of honors and council ceremonies.

Brassey's Naval Annual. William Clowes & Sons, Lond. 10/. Authoritative articles on new methods of warfare, diplomatic relations, official correspondence and navy statistics of all countries.

Brooklyn Daily Eagle Almanac. Brooklyn Daily Eagle. \$1. Information, general of the world, and special of N. Y. C. and Long Island.

Bulletin of Bibliography and Dramatic Index. Boston Book Co., Bost. \$2. Book lists, periodical news, and dramatic index to theatrical and musical magazines not indexed elsewhere. Quarterly.

Business Digest. Cumulative Digest Corporation, N. Y. \$6. With quarterly cumulation \$10. Weekly business cyclopedia, digest of news and progress from 42 magazines for business executives.

Canada Year Book. Canada Dept. of Trade and Commerce, Ottawa. Free. Well-indexed classified record of physical, political, social, economic and financial conditions.

Canadian Almanac and Miscellaneous Directory. Copp, Clark Co., Toronto. \$1. Canadian commerce and government. Annual.

Carnegie Endowment for International Peace Year Book. Carnegie Endowment for Internat. Peace, Wash., D. C. \$1. Record of undertakings and accomplishments.

Catholic Who's Who Year Book. Burns & Oates, Lond. 3/6. Notable living men and women of the British Empire with roll of honor of deceased soldiers.

College Entrance Examination Board. Ginn, Bost. 60c. Questions set at examinations. Annual.

China Year Book. Routledge & Sons, Lond. 10/. More like an encyclopedia than the ordinary year book; historic and social information.

Congressional Directory. Gov. Ptg. Office, Wash., D. C. 60c. Sketches of congressmen, cabinet officers and supreme court justices, personnel of committees, directory of government officers with brief statements of their duties, also diplomatic and consular list.

Dramatic Index. Boston Book Co., Bost. With Magazine Subject Index, \$8.50. Covers articles and illustrations in American and English stage journals, also lists of books on the drama.

Electrical Supply Year Book, Western Electric Co., N. Y. Illustrated price list.

Engineering Index. Engineering Magazine Co., N. Y. \$3. Annual cumulation of index published monthly in Engineering Magazine.

Englishwoman's Year Book and Directory. Macm., N. Y. \$1.25. Encyclopedia of education, professions, public work, employment, law and other matter of interest to women.

Federal Council Year Book. Federal Council of the Churches of Christ in America. N. Y. 50c. Directory of its constituent bodies, with denominational societies and statistics.

Financial Review. Wm. B. Dana, N. Y. \$2.50. Month by month history of financial events of preceding year, statistical tables on finance, commerce and railroads. Annual.

The Flying Book. Longmans, Lond. 2/6. Aviation world who's who and industrial directory.

Garden and Farm Almanac. Doubleday, Page & Co., Garden City. 25c. Directory of state and national agricultural activities.

Guide to South and East Africa. Sampson Low, Marston & Co., Lond. 1/. Annual guide for tourists, sportsmen and settlers.

Handbook of New England. P. E. Sargent, Bost. \$2. Annual historic and present-day guide to towns and villages of New England.

SUPPLEMENTARY PUBLICATIONS 365-13

Hazell's Annual and Almanac. Oxford Univ. Press., Lond. 3/6. Authoritative information concerning British Empire and other nations; important current topics and astronomical matter.

Heaton's Annual. Dominion Law Book Co., Toronto. \$1.25. The commercial handbook of Canada and boards of trade register.

Hendrick's Commercial Register of the U. S. S. E. Hendricks Co., N. Y. \$10. Annual register for buyers and sellers in architectural, electrical, engineering, mining, railroad and allied industries.

Hide and Leather Year Book and Directory. Jacobsen Pub. Co., Chic. \$2. Includes statistics, trade organizations, etc., for U. S. and Canada.

Hubbell's Legal Directory. Hubbell Pub. Co., N. Y. \$7.35. Annual lists of lawyers, important state laws, court calendars and procedure, also synopsis of laws of Canada, England, Scotland, France; Germany, Holland and Mexico, with trademark laws of Argentina, Chile and Uruguay.

Imperial Year Book for Dominion of Canada. Imperial Year Book, Montreal. \$1.50. Paper, \$1. Government, resources, commerce and activities of the Dominion as a whole and each province individually; briefer accounts of other countries in British Empire.

Implement Blue Book. Midland Pub. Co., St. Louis. With subscription to Farm Machinery, \$2 per year. Implement and vehicle directory of U. S. Annual.

Index of Mining Engineering Literature, by W. R. Crane, Wiley, N. Y. Vol. 1, 1909, \$4; vol. 2, 1912, \$3. Index of mining, metallurgical, mechanical, electrical and chemical engineering subjects, as related to mining engineering.

Indian Year Book. Bennett, Coleman & Co., Bombay. ——. Principal topics of the day with historical, commercial, industrial and educational statistics.

Industrial Arts Index. H. W. Wilson Co., White Plains, N. Y. \$7. Cumulative index to select list of engineering and trade periodicals, few of which are covered by other indexes.

Industrial Directory of N. J. Bureau of Industrial Statistics of N. J., Trenton, N. J. Triennial.

Information. Bowker, N. Y. \$4. Monthly digest of current events and world progress—cumulated quarterly and annually.

Insurance Year Book. Spectator Co., N. Y. 2 vols., \$6 ea. Summarized reports of all insurance companies in U. S. and Canada. One vol. on fire and marine insurance; another on life, casualty and miscellaneous.

International Military Digest. Cumulative Digest Corporation, N. Y. \$2. Monthly review of current literature of military science, cumulated annually.

Jeweler's Blue Book. Norris, Allister-Ball Co., Chic. — Annual price list of supplies for jewelers, watchmakers and opticians.

Kelly's Directory of Merchants, Manufacturers and Shippers of the World. Kelly's Directories, Lond. 36/. Annual.

Living Church Annual and Churchman's Almanac. Young Churchman Co., Milwaukee. 75c. Paper, 50c. Directory of the Protestant Episcopal church.

Lockwood's Directory of the Paper, Stationery and Allied Trades. Lockwood Trade Journal Co., N. Y. \$3. Annual, for the U. S. and Canada.

MacRae's Blue Book. MacRae's Blue Book Co., N. Y. \$10. Consult publisher for special price. Annual buying guide for mechanical and engineering supplies.

Magazine Subject-Index. Boston Book Co., Bost. With Dramatic Index, \$8.50. Indexes 156 periodicals, American and British, and collections and publications of State historical societies. Annual.

Metal Statistics. American Metal Market Co., N. Y. 50c. Includes buyer's directory. Annual.

Mines Handbook. Stevens Copper Handbook Co., N. Y. \$10. Manual of mining industry of North America.

Monthly Catalog U. S. Public Documents. Supt. of Documents, Wash., D. C. \$1.10 per year. Free to many libraries. Descriptive classified price list.

Moody's Analyses of Investments. Moody's Investors' Service, N. Y. 2 vols., \$25; or \$15 ea. Reports and comparative ratings of corporations in U. S. and Canada. One vol. on steam railroads; another on public utilities and industrials.

SUPPLEMENTARY PUBLICATIONS 367-15

Municipal Index. Municipal Journal, N. Y. 50c. Index to current municipal literature reprinted from second issue each month of Municipal Journal.

Musical Blue Book of America. Musical Blue Book Corp., N. Y. \$5. Directory of musicians and musical societies listed by state and city.

Navy Year Book. Supt. of Documents, Wash., D. C. 55c. Paper, 40c. Compilation of U. S. naval appropriation laws, register of U. S. naval strength, statistics of foreign navies and report of secretary of U. S. Navy.

Negro Year Book. Negro Year Book Pub. Co., Tuskegee, Ala. 25c. Past development and present status of negro race in all fields of endeavor.

New International Year Book. Dodd, Mead & Co., N. Y. \$5. Encyclopedia reviewing current events and conditions in U. S. and foreign countries.

N. J. Legislative Manual. T. F. Fitzgerald, Trenton, N. J. \$1.50. Lists state officials, governing boards and institutions; records census and election returns and describes legislative procedure.

N. J. Lawyer's Diary and Bar Directory. Soney & Sage, Newark, N. J. \$1.50. Court rules and practice; important revisions and statutory enactments; official stenographers; alphabetic and classified lists of N. J. lawyers.

N. J. State Federation of Women's Clubs, 29 Monticello Ave., Jersey City, N. J. Annual reports and directory.

N. J. Sunday School Assoc. State Office, Newark, N. J. Interdenominational county reports. Annual.

N. Y. Charities Directory. Charity Organization Society, N. Y. \$1. Descriptive list of agencies engaged in social, civic, religious or educational work in New York City.

N. Y. Times Index. N. Y. Times. \$8. "Master-key to all newspapers." Quarterly.

New Zealand Official Year Book. Eyre & Spottiswood, Lond. Historical digest of laws, current public affairs and commercial statistics.

Newark Common Council Manual, Newark, N. J. Lists city officials, governing boards and institutions; defines duties and power of Council and records election returns.

Newark-Made Goods. Board of Trade, Newark, N. J. Directory of Newark manufacturers and index of articles manufactured. In English, French and Spanish.

Official American Textile Directory. Lord & Nagle Co., Bost. \$3. Reports of all textile manufacturing establishments in U. S. and Canada with yarn trade index.

Official Catholic Directory. P. J. Kenedy & Sons, N. Y. \$5. Paper, \$3.50. U. S. ed. paper, \$2.50. Ecclesiastical statistics for U. S. and its possessions, Cuba, British Empire, Austria-Hungary, Germany and Mexico.

Official Hotel Red Book and Directory. Official Hotel Red Book and Directory, N. Y. \$3. Annual list with rates of best hotels in U. S., Canada and Latin America.

Official Register and Directory of Women's Clubs in America with classified list of lecturers and entertainers for club programs. Winslow, Bost. \$1.

Official Register of U. S. U. S. Govt. Ptg. Office, Wash., D. C. \$1.50. Directory of persons in civil, military and naval service, exclusive of postal service.

Pan-American Commercial Guide. Nicoletti Bros., N. Y. Consult publisher for price. Industrial and administrative description in Spanish and English of American Republics and colonies.

Penrose's Annual. Lund, Lond. 5/. Art processes; illus.

Philanthropies of Newark, N. J. Bureau of Associated Charities, Newark, N. J. Descriptive list of organizations endorsed by Bureau of Associated Charities.

Poor's Manual of Public Utilities. Poor's Manual Co., N. Y. \$10. Annual.

Poor's Manual of the Railroads of the U. S. Poor's Railroad Manual Co., N. Y. \$12. Annual.

Port Directory of Canadian Ports. Govt. Ptg. Office, Ottawa, Dept. of Marine and Fisheries. Gives information regarding wharves, depth of water, facilities for loading, etc., for seaports and inland harbors.

Qui Etes-Vous. Delagrave, Paris. 6 fr. 50. Biographical dictionary of French contemporaries.

Reader's Guide to Periodical Literature. H. W. Wilson Co., White Plains, N. Y. Consult publisher for price. Author and subject index to selected list of periodicals.

Scott's Standard Postage Stamp Catalogue. Scott Stamp and Coin Co., N. Y. Paper, bound \$1; cloth, bound, \$1.25. Date of issue, color, shape and value of every postage stamp that has ever been issued by any government in the world. Annual.

"Shipping World" Year Book. Shipping World Offices, Lond. 8/6. Digest of merchant shipping acts; port directory of British colonial and foreign harbors; tariff schedules of many countries.

Shoe and Leather Reporter Annual. Shoe and Leather Reporter Co., Bost. With subscription to Shoe and Leather Reporter, \$5 per year. Official annual directory of manufacturers and dealers in U. S. and Canada with principal houses in other parts of world.

South African Year Book. Routledge & Sons, Lond. Historical, physical, political, commercial and biographical information.

South American Year Book and Directory. Louis Cassier Co., Lond. 25/. Commercial guide to So. America, Panama Canal, Falkland Islands and Trinidad.

Statesman's Year Book. Macm., N. Y. \$3.50. Statistical and historical annual of countries of the world.

Statistical Abstract of U. S. Govt. Ptg. Office, Wash., D. C. Free. Covers population, finance, commerce, industries, agricultural and other products, immigration, education, etc.

Suffrage Annual and Women's Who's Who. Stanley Paul & Co., Lond. 6/. International suffrage alliances and affiliated associations, biographical sketches and dictionary of dates.

Sweet's Architectural Catalogue. Sweet's Catalogue Service, N. Y. With subscription to Architectural Record. \$3 per year. Annual classified dictionary.

Thomas' Register. Thomas Co., N. Y. \$15. American manufacturers and first hands in all lines.

The Times Annual Index. London Times, Lond. Consult publisher for price. Date key to current events.

Wer Ist's. H. A. Ludwig Degener, Leipzig. M 13.50. Biographical dictionary of German contemporaries.

Whitaker's Almanac. Joseph Whitaker, Lond. 3/6. Governments, finances, population, commerce and general statistics of nations of the world with special reference to British Empire and U. S.

Who's Who. Black, Lond. \$2.50. Annual biographical dictionary of most prominent persons of England and America, including some other notable men and women.

Who's Who in America. A. N. Marquis & Co., Chic. \$5. Biographical dictionary of notable living men and women of U. S.

Who's Who in Japan. Who's Who in Japan, Tokyo. 12/. Biographical dictionary of Japanese contemporaries, foreign residents in Japan and others prominent in the Far East.

Who's Who in New England. A. N. Marquis Co., Chic. Vol. 1, 1909; \$5. Vol. 2, 1916; \$12.50. Biographical dictionary of leading living men and women.

Who's Who in the Theatre. Pitman, Lond. 6/. Biographical record of the contemporary stage.

Woman's Who's Who in America. American Commonwealth Co., N. Y. \$5. Biographical dictionary of contemporary women of U. S. and Canada. Vol. 1, 1914.

Who's Who in Music. Sir Isaac Pitman & Sons, Lond. \$2.50. Biographical record of contemporary musicians with list of chief musical schools and societies in United Kingdom. Vol. 1, 1913.

Who's Who in the Colored Race. Frank Lincoln Mather, Chic. \$7.50. Biographical dictionary of men and women of African descent. Vol. 1, 1915.

Who's Who Year Book. Macm., N. Y. 35c. Supplement to Who's Who in which names are classified by office.

World Almanac. World Pub. Co., N. Y. 25c. Foreign and other statistics.

The Year's Art. Hutchinson & Co., Lond. 5/. Annual epitome of matters relating to sculpture, engraving, architecture and schools of design.

Young Men's Christian Associations of N. A. Year Book. Association Press, N. Y. \$1.75; boards, \$1.50.

List of Subject Headings

Abbey

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Academic freedom

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Acids

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Aeronautics, Military

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Agricultural experiment stations

Agricultural laws and legislation

Agricultural schools

Agricultural societies

See also Patrons of husbandry

Agriculture

See also Vacant lot cultivation

Agriculture, Study and teaching

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Air-brakes

Air compressors

Air-pollution

See also Dust; Smoke

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Alaska

Albania

Alcohol

Alcoholism

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Alternators see Dynamos

Aluminum

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Amer. Bible society

Amer. lib. assoc.

Amer. lib. assoc., Booklist

American literature

Amer. soc. for testing materials

Americanization see Immigrants in the

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Ammonia

Amusements see Entertainments;

Games

Anarchism and anarchists

Andorra

Anglo-Saxons

Animal experimentation

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Animal industry *see* Domestic animals

Animals

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Animals, Treatment

See also Cruelty; Humane societies;
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Appalachian mountains

Apples and apple trees

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April Fools' day

Aquariums

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Arbitration, International

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 War

Arbitration and conciliation, Industrial

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Architectural sculpture

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Modern American Library Economy As Illustrated by the Newark N. J. Free Public Library

By John Cotton Dana

*The Color-and-Position Method for Filing
Pamphlets, Books, Maps, Documents,
Letters and other Material
Part I*

By J. C. Dana

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Introduction

The filing of pamphlets, books, maps and other material by the Color-and-Position, or Colored-Band, method has been in practice in the Newark, N. J., Public Library for seven years. Though first devised by me its use was developed by Miss Sarah B. Ball, long Librarian of the Business Branch. In making a study of it for this volume, I have made many modifications and additions to the application it has received in actual practice, not a few of them due to the keen interest taken in the subject by members of the library staff.

This pamphlet contains several statements of the general principle of the method and several descriptions of its actual application. A second pamphlet, now in preparation, will continue the study and will give further and more minute details of materials and processes. War conditions have delayed the preparation of this work for the printer far beyond the date at which it has been promised in printed announcements. It seemed unwise to delay longer the publication of this first part, which will answer many questions and enable those who wish to do so to apply the Color-and-Position method to many of the simpler pamphlet-mastery problems without waiting for the complete volume.

It is difficult to assign properly the credit for all aspects of the development of the scheme of notation these pamphlets describe. As already stated, I gave the idea of Color-and-Position to Miss Ball, for use in our Business Branch, seven years ago. Since that time I have done little more than listen with approval to her statements of its excellence and to her reports of its application to groups of pamphlets, maps, etc. Its value and importance were not realized until I began to prepare these pamphlets a few weeks ago. After examining the scheme and the uses to which Miss Ball had applied it, I began to describe it in writing. It was modified and expanded as it was written out and new features added to it. The description of it in these pamphlets is my own, as are also the rather glowing claims for its excellences and its powers.

Mrs. L. G. Travis, of the Library and Museum staff, worked out certain admirable modifications for the special task of classifying 6,000 pamphlets by groups, sub-groups and consecutive numbers—all to be described in a later pamphlet. Miss Alice Wilde, of the Library staff, pinned down to a desired definiteness the scheme for the Decimal notation which had been for some time floating through my mind. Miss Marguerite L. Gates, also of the Library Staff, drew up the first draft of the several applications Miss Ball had made at the Business Branch, thus exposing the fundamentals of the method and the wide range of its possible usefulness. Miss Beatrice Winsor, assistant librarian, acting as conscientious objector and implacable critic, has kept us all from chasing rainbows and from classifying by spectro-analysis all books and pamphlets, to say nothing of fogs, shadows and our own imaginings.

We are still suffering somewhat from color-intoxication, and still have the feeling that a moderate use of the Color-and-Position Method with a touch of digit-values and a bit of change in size here and there, would straighten out the problems of the army and the navy and munitions and transportation and perhaps even those of coal and food.

We have shown the scheme to many and gained understanding and approval always. Best of all, it has been in use under our eyes for six years. We believe it to be a very noteworthy contribution to the ever-new problem of keeping in order a row of things that are as bewilderingly alike in looks as they are unlike in content.

J. C. DANA.

January 27, 1918.

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The Colored Band, or Color-and-Position Method of Filing

Why We Use It.

The pamphlet output of the world is increasing with astonishing and bewildering rapidity. To the pamphlets published as such must be added articles in magazines, and in the reports and proceedings of countless societies, many of which are taken out and then become pamphlets. These native-born pamphlets and these can-be pamphlets are not all of value to every library into which they may come; but they come in increasing numbers every year and almost every month, and, moreover, they are daily of more importance relatively to the bound books; and because they are recent and of immediate value, are daily more insistent in their demand that they be made easily and quickly accessible to the inquirer.

About this we have written at some length in the Vertical File pamphlet in this series and in the supplement thereto, the Information File, the name we now give to our vertical file.

Our experience with the vertical file method of handling pamphlets, notes and clippings has been very satisfactory. But it is as true of this device as it is of many other schemes for arranging material for quick and easy reference, that it tends to exalt itself, to draw to itself things which it is not well fitted to handle, to become so large as to defeat in some measure the very ends for which it was created, and, generally, to grow unwieldy in both size and complexity.

Being familiar with this tendency in contrivances of the nature of a vertical file, we guarded against it in a measure by adding to the scheme of management laid out for it, a plan, described in the Vertical File pamphlet, for semi-automatic weeding out of material as it lost its value or became unfitted for the vertical file method of handling.

We guarded against it still further by refusing to put into it large pamphlets, pamphlets in long sets or series, and pamphlets not definitely of value in the study of subjects of the day. As many thousands of pamphlets in these classes come to us every year and demand for proper handling some less expensive method than that of the binder and the cataloger, or of the card indexer, we naturally turned more and more often to the Colored-Band method.

The Principle in Outline

The above has been written, less to explain our own solution of our own special problem, than to make clearer the condition under which any person who is seeking to obtain a fair degree of mastery over a large and growing mass of pamphlet literature may turn to the Colored-Band method with no small confidence that it will save time, money and space.

The fundamental principle of it is easily understood. It lies in the application to the back of each of a large group of pamphlets as they stand in long rows on the shelves, a strip of paper which has two elements of distinction: (1), color and (2), position.

To these two elements I have added, for certain purposes, still another, that of number-significance.

If colors only are used, without regard to position, it is obvious that a given group can be divided into as many sub-groups as there are colors used, say ten, the bands in all pamphlets of the given group being of the same color and being pasted at random across their backs.

But if to color is added position, it is at once just as obvious that the possible sub-groups, each easily distinguished from all the rest, are as many times ten as there are fixed and agreed-on positions for each band of the several colors.

If the pamphlets are all 9 inches high, or can in effect be made so by placing them in 9-inch envelopes, and if each of the spots of color (we use narrow bands of colored paper, pasted on) needs, for its well-defined location, say, half an inch of space, then, for

each color, there are 16 possible locations on any pamphlet. As you start with ten colors, you have at once 160 distinctive marks. That is to say, one band on each of a thousand pamphlets, that band being of the same agreed color and put in the same agreed place on all pamphlets on the same subject, will divide the thousand into 160 groups. These groups can be easily distinguished from one another by a glance at the shelves. If one of them, no matter how thin it may be, is out of its place, it betrays its wandering at once by showing a spot of color out of the ranks. A tyro can keep them in order. Unless certain groups are quite large any needed pamphlet in any group can be quickly found by taking down and running over that group.

But the scheme does not stop here. If you have 5000 pamphlets which you wish to make easily accessible; to arrange, that is, so that any one of them or any group of them on a special subject, can be quickly found, and you find that they divide quite properly into 25 sub-divisions, and that each subdivision needs again to be divided into, say, nine classes, you can proceed thus:

Divide the pamphlets first into 25 classes. Close to the bottom of the backs of all the pamphlets in each of the ten largest classes paste a band, to each class a band of a different color. It is well to put the ten single bands on the ten largest classes, for in this way a little labor is saved, as all other classes after the first ten take each two bands.

On all the pamphlets in the next nine classes paste two bands across the bottom of the backs; the two being a red one at the bottom and one of another color just above it.

For the remaining six classes use any color other than red at the bottom and any colors, other than red, for the six different bands above the bottom one.

If, now, a clerk is told to set the 5,000 pamphlets in rows, standing up like books, on the shelves of an ordinary book-case, putting together all those bearing the same color marks on the backs, she will easily and quickly arrange them in 25 classes or groups, each member of each group going almost automatically to its fellows.

It is now desirable to know what each band, double or single, means, that is, what kind or class of pamphlets each one indicates, and in what order the several classes or groups shall always stand. Let the clerk therefore divide one side of a stout card, 9 inches high and 7 inches wide, into two columns of equal width. At the left side of each column let her paste half-inch strips of the single and double bands as they appear on the backs of the pamphlets, arranging them, from the top of the card down, in the two columns in the order in

RED	GREEN
AVIATION	RED
YELLOW	BLUE
BOMBS	RED
BLACK	
BARRAGE	
GREEN	
CAMOUFLAGE	
BLUE	
RED	
RED	
YELLOW	
RED	
BLACK	
RED	

Fig. 1. Reduction of card, 7" x 9". The black squares represent the strips or bands, in colors as named beside each. Not all the spaces used are filled out, as that seemed unnecessary. The description in the text makes plain the purpose of the card.

which you wish the classes of pamphlets, distinguished by the several single and double bands, to stand on the shelves. Let her then write on the card, opposite each band-symbol, the name of the class of pamphlets for which it stands. (See Fig. 1.) Let her then arrange the several groups of the pamphlets themselves in the order in which their several symbols are arranged on the card.

Your 5,000 pamphlets are now divided into 25 classes or groups; each group is indexed as to its character and location by the bands and titles on the guide or index card; pamphlets can be added easily to any group; a pamphlet out of place betrays itself at once; and all can be handled by unskilled labor.

The classification must now go further, for each group must be divided into at least nine sections, this division into sections being made in accordance, let us assume, with the subjects treated by the pamphlets in each section. For convenience of explanation let us assume that in this case each group is to have precisely nine sectional divisions, though we believe it will be quite obvious that modifications of the scheme will make any subdivision whatever quite possible; for example, two sections only in some groups and twenty or more in others.

On the reverse of the 9" x 7" card already used, draw eight horizontal lines (Fig. 2) beginning 1 1-2" from the bottom and placing them 3-4" apart. At the left margin, and on the lines, paste half-inch strips of green bands. (These bands are quarter of an inch wide.) Beside these at the right, and on the lines, write eight sets of letters as follows, beginning on the line 1 1-2 inch from the bottom and proceeding upwards:

U V W X Y Z

R S T

N O P Q

L M

H I J K

F G

D E

A B C

Now, divide all the pamphlets in each of the 25 classes into eight groups or sections, putting all those which treat of subjects beginning with A, B, or C in group one, all those beginning with D or E in group two, and so on.

Let a clerk now paste across the backs of all the pamphlets in each "A B or C" group a green band at the same height from the bottom of their backs as is the "A B or C" green band on the card—in this case 1 1-2". Then let her treat in the same manner all pamphlets in the "D-E" group or section, putting the bands on their backs precisely as far from the bottom as is the "D-E" band on the "index," or "guide," or "alphabetizing" card.

And so she continues, until every pamphlet has on its back a green band, as well as the single or double classification band at the bottom.

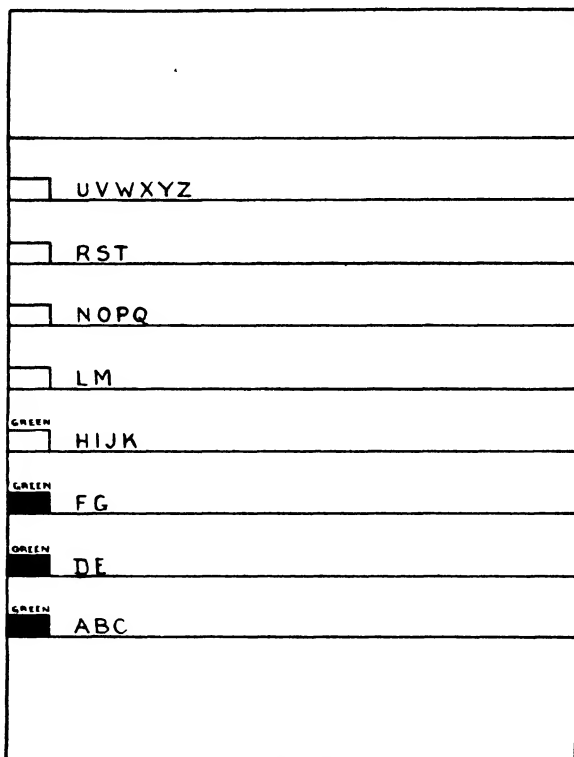


Fig. 2, Reverse of Fig. 1. The color bands are indicated by the black and white squares.

Let her then again arrange the 5,000 pamphlets in rows on a book-case, first putting them in groups by means of their bottom or class marks, single and double bands; next, putting the groups thus made in the order on the shelves of their class-symbols—the bottom-bands as shown by the front of the index card; and, then, in each class, arranging them in the order of the green bands, those whose bands are nearest to (1 1-2" from) the bottom coming first, and those with bands higher up following in due course.

You now have 5,000 pamphlets divided, "inevitably" one may say, into eight times 25, or 200 groups. Every one not only belongs in its proper place, but finds itself there with perfect ease and betrays its dislocation at a glance.

Aside from the preliminary subdivision of the pamphlets and their hasty marking to indicate their subjects, which must, of course, be done by an expert, no skilled labor has gone into the work. Any group may be found in a moment, as can also the pamphlets on any given subject within any group.

As already said, the process seems much more complex and laborious in description than it is in fact. The economy of the method is made plain if we contrast, roughly, the work called for by it in mastering the 5,000 pamphlets, with the work called for by the process of indexing or of binding, classifying and cataloging.

An expert must handle every pamphlet once or twice in either case. In the Colored Band, or Color-and-Position method he does this hastily, once, to divide it into 25 groups; and, more carefully, a second time, to determine and indicate the subject of each pamphlet. From there on the Colored Band method demands only clerical assistance, a few hours time and a few cents worth of colored paper.

By the card-index method a card must be written, and by a skilled person, for every pamphlet; each one must be given a distinguishing number; they must be kept in order by that number; the numbers can be seen only by taking the pamphlets in hand; and the marks indicative of their places on the shelves, being placed on the faces of the pamphlets, since there is no room on their backs, can not be seen save by taking them from the shelves.

If bound, classified and cataloged the cost for each pamphlet would be at least 25c. and probably nearer 45c.

The Principle Restated—and Applied

We have inserted here this repetition of our statement of the fundamentals of the scheme, because these fundamentals are of its very essence. To present them clearly is the chief purpose of this pamphlet, aside from its purpose as a guide to our own workers in carrying out our filing plans.

We are quite convinced that any intelligent person who cares to spend the time to understand these fundamentals will find that, with them as a basis, his own inventive powers will supply him with abundant suggestions for applying the scheme to many of the problems of pamphlet mastery that confront him.

Let us assume that one has a collection of a thousand pamphlet catalogs of manufacturers, which are used quite frequently by several different persons; that they range in height from 8" to 12"; that they are somewhat ephemeral in character in that some soon are so out of date as to be useless, some are frequently reissued in revised form and some are soon superseded by bound volumes of several pamphlets combined. For such a collection of ephemeral material a vertical file method of arrangement is too expensive. It calls for folders, drawers and a classification or alphabetizing process; for the labor of writing class numbers on each pamphlet; perhaps for the development of an elaborate class scheme and certainly for skilled labor in returning those taken out for use.

Pamphlet boxes are objectionable for kindred reasons. Classifying and binding with class number on the back of each pamphlet—this is clearly quite prohibited by cost.

The procedure by the method we are describing is as follows:

The pamphlet catalogs are divided into three groups, in accordance with the articles with which they are chiefly concerned: 1. Hardware. 2. Furniture. 3. Carpenters' tools. For the purpose of illustration we assume that the three groups are about equal in number. The three kinds are indicated by means of narrow

bands of colored paper called "Key Bands;" 1 by red, 2 by green and 3 by blue, pasted across the backs and close to the bottom, all the catalogs in each group receiving the same color.

(The bands themselves, where they may be obtained and the method of pasting them on are described later.)

It is decided that each group shall be arranged alphabetically by the names of the firms from which the catalogs come. Also it is decided that, as there are only about 400 catalogs in the largest group, the sub-groups will be small enough for easy handling if the main groups are alphabetized into ten divisions each.

The pamphlets are now arranged in the alphabetic order of the names of the firms which issue them. Each group is then divided into sub-groups according to their firm names as follows: A, B; C, D; E, F; G, H, I; J, K; L; M, N; O, P, Q; R, S; T, U, V; W, X, Y, Z.

That is, put together all catalogs the firm names of which begin with A or B in one group, with C or D in another, etc.

On the backs of all the pamphlets in each of these sub-groups now paste a colored band, this band being placed at the same distance from the bottom of all pamphlets of all three of the main groups the initials of whose firms fall within the same sub-class. For example, all pamphlets whose firm names begin with C or D, no matter to which of the three main groups of Hardware, Furniture and Carpenters' Tools they may belong, will have their alphabetizing bands at the same distance from the bottom.

To make sure that the bands are rightly placed, proceed as follows: Across a stout card, 9" high and 7" wide, draw a series of ten horizontal lines, the first 1 1-2" from the bottom, and the others half an inch apart above it until the 10th is reached.

On these lines near the left and right edges of the card, write the letters of the alphabet as in the table just given putting A B on the first line, C D on the second, and so on. (Fig. 3.)

Lay the card, now forming a "guide" for placing bands, and hereafter so called, on the table before you. Hold the pamphlets by it, and even with it at the bottom, one after the other, and on each

paste a green band at the point indicated by that mark on the card which corresponds to the initial letter of its firm name. If on a given pamphlet that initial is, for example, A or B, then on that pamphlet paste a green band with its bottom or lower edge just 1 1-2" from the bottom of its back. If its significant initial is C or D, paste the band 2" from the bottom, and so on; always placing the bands so that their lower edges are even with those horizontal lines on the guide which the firm's initial letters indicate.

WXYZ	WXYZ
TUV	TUV
QRS	QRS
OP	OP
KLMN	KLMN
IJ	IJ
GH	GH
EF	EF
CD	CD
AB	AB

Fig. 3. Guide for placing bands on the alphabetically arranged sub-groups of collection of pamphlets.

When the sub-groups are all thus banded, place the pamphlets again on the shelves, first in groups by the Key Bands at the bottom of each and, next, in sub-groups by the green alphabetizing bands they all carry.

How to Use the Guide

One now wishes, for example, to discover a catalog of hardware issued by Jones & Brown. He looks at the guide, notes the position of the J K L alphabetic band, holds up the guide by the hardware catalogs, which have red bands at the bottom, and draws it along until he comes to a group on the back of which is a band at the same height from the bottom of the catalogs as is the J K L band from the bottom of the card he holds. He takes down that group and finds Jones & Brown's catalog in it.

All the catalogs are now divided into three kinds by the three colors of the bottom bands.

The catalogs in each group are arranged alphabetically by the initial letters of the names of the firms that issue them. All with the initial letters A or B in all three groups, have a green band at the point indicated, next above the key band at the bottom. Those with the initial letters C or D have a green band at the point indicated, just above the A B band.

This method does not secure strict alphabetic arrangement; but it does bring together the catalogs of all firms whose names begin with the same first two or three letters. In order to find the catalog of a given firm, it is necessary to find on the guide the colored band within whose range falls the first letter of the firm name, and then to look at the pamphlets that have their green bands at that same height, until the catalog sought for is found.

It must be said again that while this description seems to be that of a long, complicated and laborious process, the process itself is quite simple and easy. The description has purposely been made very complete and minute, and somewhat to repeat itself, for the sake of clearness.

A Special Contents Band

Here may well be added a description of one of the many possible extensions of this method of filing, an extension which shows how easily the principles of color-and-position in the marking of objects can be applied to produce results quite in the field of indexing.

The particular group of catalogs we have been considering is not, in fact, as simply and completely divided into three groups as we have assumed. Many of them include more things than the characterization we have given them, of Hardware, Furniture and Carpenters' Tools, would indicate. They extend into one another's fields and they contain items not strictly within any one of the three fields we have named. In fact, they are as unruly⁷ and as embarrassing to the classifier as are many of the bound books with which she is daily puzzled. For the owner of them, a large wholesale house, and for the employees who use them, they are quite clearly recognized as belonging, just as we have grouped them, each to its place in the three fields of hardware, furniture and carpenters' tools. Hence the classification we have given them, and hence the supreme convenience of that classification over any helter-skelter non-arrangement.

But they contain many things not common to all of them and not so predominant in any particular one of them as to make their presence a reason for giving that one a place in a special class by itself.

The essential thing in classifying books is to put each definitely somewhere, and keep it there, and to choose for each the place where it will be most readily found and most often used. Having done this, the book's personal idiosyncracies, the things it says that are not harmonious with or obedient to the particular place we have given it, must, if they are also to be readily found, be noted by some secondary device. In a card catalog this secondary device is a special card, bearing as a heading the name of the special something a book contains, a something quite distinct from those things it is chiefly concerned with, which give it its place in the classification scheme. This card, placed in its alphabetic order in a catalog, refers the

inquirer quite directly to the book which contains the specific information he seeks.

In the system we are describing, the place of this special card may often be taken by a colored band. In the case in hand it happens that a good many of the catalogs deal with kitchen utensils, and it happens also that these utensils are of considerable interest to the owners and users of the catalogs. Accordingly; on every catalog which deals at some length with kitchen utensils is placed a band of red just 4 3-4" from the bottom of its back. Thus placed it comes just above the bands which are precisely 4 1-2" from the bottom, and just below those which are 5" from the bottom. It goes over no band, but lies between two; it is easily seen in a row of pamphlets; and it enables an inquirer to discover quickly all pamphlets having much to say on kitchen utensils, and, if he seeks the catalog of a particular firm which contains kitchen utensils information, to find it readily.

The Purpose of the Examples

I should add that in the illustrations of the method thus far given, I have, for the sake of simplicity, not followed precisely the process as to colors and arrangements which will be given later in describing applications of the scheme now in actual use in the library. The details I have thus far given were purposely chosen for their simplicity, as already stated. There is, however, another and, in itself an ample reason for making them somewhat different from those used in actual applications described later, and that is, that each new set of details helps to make clearer to those who use this book, the very wide range of method to which the general scheme lends itself.

Color and position employed in distinguishing, one from another, narrow upright strips standing in rows on shelves—these are the points to be kept always in mind as the fundamentals of material, process and application in filing pamphlets by this method.

It is not necessary to say that one who applies the method to any given problem in pamphlet filing, will examine his material care-

fully, will set forth to himself very definitely the specific results he wishes to obtain, and then will adapt the details thereto.

A minor point may well be noted here; it is that not all pamphlets are bound in white, and on some the bands they are to carry may be of the same color as the cover and therefore almost invisible. If this is true in many of a group, or of an entire set of many groups, the colors of bands to be used on them should of course be selected with reference to the colors of the pamphlets. If it is true of a few only, then white round Dennison labels or strips of white gummed paper may be pasted over the points where the bands are to come.

If several different groups of pamphlets are to be kept in order by this system in the same institution, and if pamphlets from each of the several groups may sometimes be brought together as they are taken out and used, it is obvious that certain possible causes of confusion should be avoided.

If each group has its own special color of cover, or if in each group the first cover page of every pamphlet bears a legend which plainly marks it as belonging to its group, then a clerk or assistant of very modest skill can easily and without error sort all pamphlets waiting to be replaced into their several proper groups, and can then, for each group, follow the guidance of the position and color of the band or bands on them, and replace them easily where they belong.

If, however, any or all of the pamphlets in each of several groups are quite similar in appearance, then the color-and-position filing scheme for each of the groups should be markedly peculiar. These needed peculiarities may lie in a difference in width of key bands; in bands of unusual width placed near the top of the backs, above all the filing bands proper; in bands of striking colors or unusual widths placed arbitrarily at given points on the backs of all pamphlets in a group; or in any other of the many devices that will suggest themselves to the observant.

Telephone Directories

The Colored-Band method was first applied in the Business Branch in 1910, to a large collection of Telephone directories. Of

these we then had many; and the collection has steadily grown to about 1,000. They are about 7 1-2" wide and 9" high.

The great majority of them are so thin that they cannot stand upright on shelves unless they are kept in close ranks. The backs, even of the thicker ones, are without titles. It is very desirable that they be on open shelves for quick use, and that they be so arranged that any given one of them can be easily found. To classify, catalog and number them would cost a great deal of money, and the cost would be continuous, as they are revised and reissued frequently and in many cases are changed at each revision as to the states, cities, towns, counties or arbitrary areas which they cover.

It would be difficult to find a more typical example than that which these telephone directories give us of the problem offered by the modern flood of pamphlet literature. Pamphlets are many in number; they increase in number every year; they are of great value when issued; they are wanted at once if at all; most of them cease to have any value in a few weeks or months; the nature of their temporary value makes binding, classifying, cataloging and numbering quite inadvisable; they cannot be numbered on the backs like books; they are too thin to stand upright unless supported by a crowd of their fellows; and, thus arrayed, their backs offer no clue to their authors, titles or contents.

Obviously the thing needed for the mastery of pamphlets, over and above the help given by the familiar vertical file, which is expensive and cumbersome for very large collections, is a method of so marking their backs, as they stand in rows on an ordinary shelf, that any desired one can be quickly found. The method must be simple; it must call for little highly skilled labor; it must permit of removals and additions without disturbance; and it must make it very easy to keep the pamphlets in order; to discover quickly those not in order, and to replace readily any that have been taken out for use.

All these conditions are filled by the color-band scheme.

It was applied to our telephone directories thus:

The names of the States, with a few additions as shown, set down in alphabetic order, were divided into seven groups, as follows:

1. Alabama to Cuba. Dark blue.
2. Delaware to Iowa. Orange.
3. Kansas to Minnesota. Green.
4. Mississippi to New Mexico. Light blue.
5. New York to Porto Rico. Red.
6. Rhode Island to Virginia. Yellow.
7. Washington to Wyoming. Pink.

To each of these groups was assigned a color, as indicated in the table. To all directories of States in group 1 was applied a band of dark blue; to all in group 2 a band of orange; and so on.

The bands on the directories in any given group were so placed, in accordance with a guide, prepared for the purpose, as to distinguish by their different locations in their alphabetic order all the states in that group.

The guides were made of wood, 3" wide, 8" long and a quarter of an inch thick. (Fig. 4.) Along one of the long edges of these

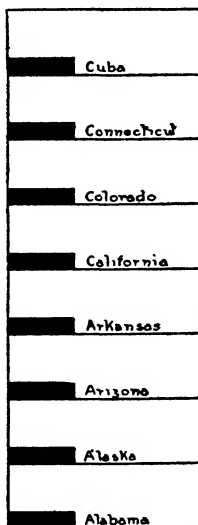


Fig. 4. Guide used in placing bands on a set of 1000 telephone directories. There are seven of these guides, each bearing bands of a different color, and each having names of the States which the several positions indicate written beside the strips of bands.

boards, were pasted bands, 1" apart, beginning at the bottom and continuing to the top, thus giving eight bands to each guide. The bands on guide No. 1 for the first group of States were dark blue, on No. 2 were orange, and so on, the colors corresponding to those given in the table above.

On the guides and beside each band were written the names of the States for which each band stood in the scheme, as indicated by its color-and-position. On all the directories were then pasted bands of such colors and in such positions as were indicated by the bands on the several guides.

One who wished to find the directories of a certain State examined the guides, found one containing the name of the State desired, held that guide by the directories banded with that color, noted the position of the band for the State required and took down the directories bearing bands in that position and among them found the one he wished. In actual practice the process is much simpler. Attendants soon learn the scheme, as do some visitors, and only occasionally is more needed than a casual reference to a guide.

It should be remembered that this process of finding a desired pamphlet under the color-and-position method is not the searching thro' a row of pamphlets in no order or in any arbitrary order. The pamphlets are set up in alphabetic order and by the color-and-position scheme are always kept so. To keep them so, even while in constant and frequent use, is very easy by this method. And users, knowing that they are always arranged as they profess to be, learn to put their hands on what they want, almost at once.

This was the first application ever made, as far as we have learned, of the color-and-position method of filing. It has given great satisfaction. Visitors to the Business Branch, who use the directories, soon learn the scheme and readily find what they wish. Even after long use and considerable wear the bands remain clearly visible and make it easy to detect a directory which is out of position and to return to the shelves, in a few moments, a large number of directories, that have been taken out for use.

Another Plan for Telephone Directories

Were we to re-mark this set of pamphlets, today, we would probably adopt a variation of the scheme, giving a little more time and labor to the original installation, and saving time and labor in all subsequent handling and use. This variation may be thus described:

Divide the 55 States, including here Alaska, Indian Territory, District of Columbia, Cuba, Porto Rico and the Philippines, as arranged in alphabetic order, into five groups, as follows:

Alabama to Florida	Red
Georgia to Maryland	Green
Massachusetts to New Jersey	Black
New Mexico to South Carolina	Orange
South Dakota to Wyoming	Blue

Assign a color to each group as indicated. On the backs of all the directories in each group, paste a band, half an inch wide and of the color indicated for that group in the table, half an inch from the bottom. This is a Key Band. It divides the directories into five distinct groups. It is made half an inch wide to make it easily seen and it is placed half an inch from the bottom that it may not be so easily broken, torn or worn.

For a guide take a stout card or a thin board, 9" wide and 10" high. (Fig. 5). On the left long margin paste 12 black bands, each half an inch long and half an inch apart, beginning 1 1-2" from the bottom. From these to the right and on a line with them, draw 12 lines across the guide. Divide the card vertically into five columns of equal width. At the top and at the bottom of these columns paste 1" strips or bands of the five Key Band colors, all as indicated on Fig. 5. Below these strips, in the several columns, write the names of the states which have been placed in each of the several Key Band groups, remembering that the alphabetic order runs always from the bottom up. Place a black band on every directory in accordance with this guide. If the directories are now arranged, first in the order of the Key Band colors, and next in the order of the

black-band position, they will stand in alphabetic order and the one guide tells at a glance just where to find any one that is needed.

Perhaps it should be noted that there are in many cases more than one directory from a State. All the directories from a given State of course receive the black band in the same position.

A Group of Books

In one of our most crowded branches are about 500 books in Yiddish. For several reasons, not necessary to give here, it is

Red	Green	Black	Orange	White
Georgia	Michigan	North Dakota	Utah	
Florida	Massachusetts	North Carolina	Texas	
Dist of Col.	Maryland	New York	Tennessee	
Delaware	Maine	New Mexico	South Dakota	
Cuba	Louisiana	New Jersey	South Carolina	
Connecticut	Kentucky	New Hampshire	Rhode Island	
Colorado	Kansas	Nevada	Porto Rico	Wyoming
California	Illinois	Nebraska	Philippines	Wisconsin
Arkansas	Iowa	Montana	Pennsylvania	West Virginia
Arizona	Indian Ter.	Missouri	Oregon	Washington
Alaska	Indiana	Mississippi	Oklahoma	Virginia
Alabama	Idaho	Minnesota	Ohio	Vermont
Red	Green	Black	Orange	White

Fig. 5. Guide for placing "position" bands on 1000 directories, and thus distinguishing the directories coming from each State.

difficult for the attendants to keep these books in the alphabetic order of their authors' names. To these a very simple color-and-position scheme was applied with excellent results.

The books were arranged in eight main groups by the initials of the authors' names. To each group was assigned a color. The authors in each group were then divided into six sub-groups, also in the alphabetic order of their names. On the backs of all the books by authors in main group No. 1 were pasted bands of the color chosen for that group, and the bands varied in position, from the bottom up, as the name of the authors of the books advanced in the alphabet. The different positions were six in each group.

No bands were placed at the spaces occupied by call numbers and authors and titles. Each group was treated in the same way. On the uprights at the ends of the cases were pasted bands, with legends, explaining the scheme; and a set of guide cards was at hand for those who wished to use them.

Attendants are able to put the books in order in a few moments. They are very much in demand and inevitably are continually being disarranged. Books asked for are easily found, even when they are not in their proper places, for the color and position of the bands make it possible to find all the books within a given alphabetic range, wherever they may be on the shelves. Many would-be borrowers soon learned the meaning of the bands and are greatly helped by them in looking for specific books.

Unbound Periodicals

At the same branch a system of bands was used to make it easy to keep in order a long range of unbound numbers of periodicals. The group included ten different journals, both weeklies and monthlies. They covered parts of two years and were duplicated in some cases. To each magazine, all standing upright in close rank, was assigned a color. The twelve months were indicated for each color by the same twelve positions in each group. The weeklies of a given month all received a band at the same point as did the monthlies for that month.

The work of banding the whole group was quite slight and the results in saving of time were very satisfactory.

Where to Get Bands

Bands of many colors in several widths and ready gummed, can be bought of the Dennison Manufacturing Company, Framingham, Mass., (N. Y. address, 5th Ave. and 26th St.), and of the Milton Bradley Company, Springfield, Mass. (N. Y. address, 73 Fifth Avenue.) They cost a few cents per hundred. Some colors fade more readily than others. It would probably be unwise to permit the sun to shine on pamphlets on which they are used. In our experience the difficulties arising from fading have been quite negligible.

We have made studies of the relative legibility of colors, of methods of attaching the bands quickly and accurately, and of far more complex uses of them than are described in this pamphlet. The results of these studies, with descriptions in detail of the use of bands on maps, prints, etc., and of our long continued success in using them on many pamphlet groups, will be given in Part 2.

We have invented a very simple device to aid in locating band positions and in attaching them. This will be described later. Here it is perhaps enough to say that we cut the bands usually into pieces an inch long and moisten the gum on their backs by pressing them on a damp sponge. To put two bands on each of 500 pamphlets takes a person of average manual dexterity from three to four hours.

The General Principles Stated Once More.

This repetition of the fundamentals of the Colored-Band scheme is given, like the others, in the hope of making clear a method which in practice is as simple as it is complex in statement.

By means of spots or bands placed on each of a collection of objects that are similar in shape and arranged in ranks or files, if the two factors of color and position are used in the application

of the spots or bands, it is possible to divide the collection into any desired number of groups and sub-groups. These groups and sub-groups, down to the utmost analysis of the collection, can be quite easily distinguished from one another. The colors and positions of the spots or bands mark the classification or grouping so clearly that an object out of place in the system declares its error of position at once, and indicates its proper position.

I call this the Color-and-Position Method of filing.

The word filing is used in the definition because the method was first devised and used, some seven years ago, to keep in a certain fixed order a long series of pamphlets.

A Colored-Band Notation for the Decimal Classification

The purpose of this section is to describe the adaptation of the Color-and-Position Method to the classification of pamphlets, books or any other material by the Decimal or Dewey System. Such an adaptation is quite possible. The character of the result and a suggestion of the method's possibilities is indicated by mention of the fact that, by adding the factor of number values to each of the ten colors used in the process, we can, using only four spots of color on any one object, give to each of 99,999 objects its own distinct, perfectly distinguishable and easily understood mark, each mark being equivalent to one of the class figure groups in the first 99,999 places in the Decimal system of notation.

Under certain conditions, for example, in the classification of a large number of thin pamphlets which it is desirable to keep in closely classed order on open shelves, accessible to users, the advantages which lie in the use of spots of color over the use of Arabic numerals are very great. The colors in the case of pamphlets are applied by means of narrow bands of colored paper pasted across their backs. For example, the color spots are easily read, and, being easily read, they give a certain self-propulsive power to each pamphlet, almost compelling it, as it were, to stand in its own proper place in the ranks, and nowhere else. Arabic numerals do the same; but they do it only when they are read, while the spots of color

do it simply by being seen. The advantage of the Color-and-Position class mark over the Arabic numeral which lies in the great expansive power of the former, an expansiveness gained for the most part merely by additions and not by revisions, is here merely mentioned. And mention only is here made of the fact that if, to color, position and number-value up to ten, be added the factor of size—and this is quite possible and very easy in many applications of the scheme—the number of color spots needed for certain elaborate classifications can be greatly reduced.

The elements of the class-mark method are quite simple. For purposes of illustration I assume that the objects to which the method is to be applied are pamphlets, large and small, thick and thin. With a few exceptions they are at least 9" high and those less than 9" are placed in manila envelopes of that height, as are also single sheets.

Strips of gummed paper, quarter of an inch wide and one inch long, are used for color spots. They are of ten colors, each easily and quickly distinguished from all the others. In practice only seven colors, properly so called, are used, as it is not easy to find more than that number of a sufficient vigor and carrying power to be easily distinguished. To the seven are added black, a checker board pattern and a pattern of black and white stripes.

To these are given number-values, those of the nine digits and zero, and these values are the same in all their uses.

The position values are given by dividing the backs of the pamphlets, on a scale drawn up for the purpose and the same for every pamphlet, into ten half-inch spaces, beginning an inch and a half from the bottom. The inch and a half at the bottom is used for the class marks of the first 999 divisions and subdivisions of the Decimal scheme. In this space, at the bottom of each pamphlet the bands have their values as digits and are read from the bottom upwards.

In the space above this inch and a half the bands have their values of position and also their color-values as digits; the latter being always the value which is first read.

Steps in the Process

Divide one side of a stout card, 7"x9", into two parts by a line down the center. Draw a horizontal line across the card 1-2" from the lower edge. Along the left margin and above the horizontal line paste half inch strips of the ten different kinds of colored paper to be used for color-marks, placing the first, lemon, on

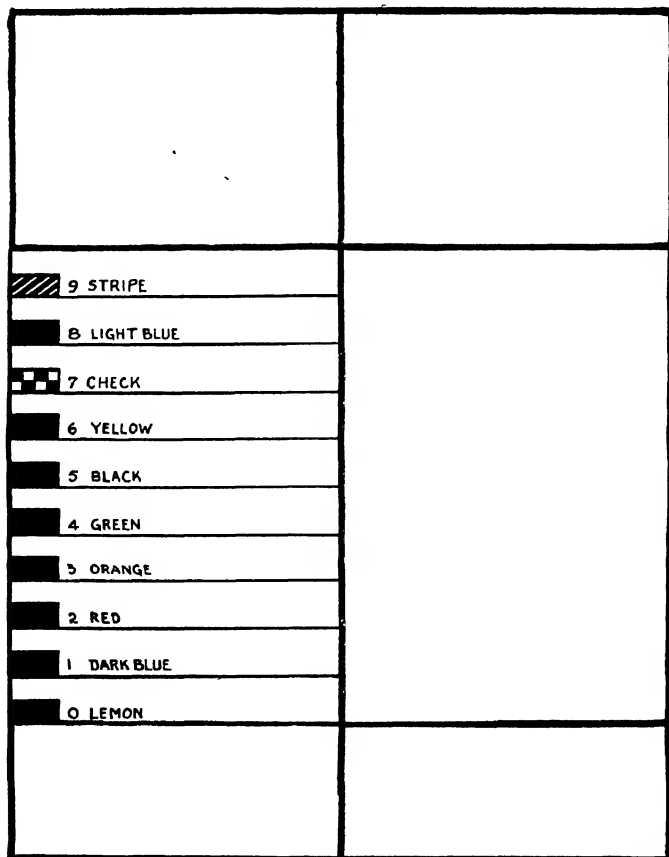


Fig. 6. A card or board, 7" x 9", used as a guide in placing bands on pamphlets to serve as class marks of the Decimal system of classification.

the horizontal line and the others, all in the numeric order of the digits assigned to them, above the first, and half an inch apart. To the right of each strip write the digit assigned to it, and also, if you choose, the main division of the decimal system of which each is the significant number.

To the right of the vertical line write such brief directions to the clerks or assistants who are to apply the bands as you think may be needed or helpful. (Fig. 6.)

Let a person skilled in the use of the Dewey-Decimal system now classify the pamphlets which form the collection to be given the Color-and-Position notation.

A clerk or assistant now applies the bands. She does not need for the proper application of the color bands, any skill in classification or any knowledge of the results which application of the bands will produce in the arrangement of the pamphlets, tho' such knowledge on her part would of course make her work more interesting. She should have an accurate eye for place and color and good skill with her hands.

She first puts all the pamphlets in ten groups, dividing them according to the first of the figures pencilled on their front covers by the classifier. On every pamphlet in each group she pastes a band, quarter of an inch from the bottom of the back, the band for each group being of the color indicated, according to the table or guide, Fig. 6, by the first figure on it.

This done, she divides each group into sub-groups, according to the second figures in the numbers the classifier assigned to them, and pastes bands on each, quarter of an inch above the first one, in accordance with the table. For example, if the first number on a given pamphlet is 6, it will bear a yellow band near the bottom of its back. If the second number is 4, it will bear a green band, just above the yellow band.

Proceeding again in the same way, she divides the subgroups into groups of the third grade according to the third digits in their respective class numbers, and puts bands on each, quarter of an inch

above the second band, of the colors designated by their respective sub-numbers.

Going on with our example: If the pamphlet in hand has 1 for its third digit it will receive a dark blue band quarter of an inch above the second. The number values of its bands, read from the lowest upwards are, yellow, 6; green, 4; and dark blue, 1, forming its class number, 641.

The pamphlets are thus divided into so many of the first 999 divisions of the Decimal System as they may need for their proper placing in the scheme. Many of the divisions in the 999 possible ones may, of course, not have been needed for this particular group of material. In such cases the zero or naught in the second or third place in the class number is indicated by the absence of a band.

It is proper here to call attention to the fact that, in arranging the colors in accordance with their numeric values, the lemon or zero, is placed first and at the bottom. In the application of the three bands at the bottom of each pamphlet, this position on the scale above is followed, in that a pamphlet in the zero class will bear a lemon band a quarter of an inch from the bottom of its back.

This lemon band, it should be added, is much more readily noted, even on a white pamphlet, than one who has not seen it in use would suppose.

Here, also, may be noted the fact that certain pamphlets may be placed by the classifier in one of the nine main classes, say, 6, or useful arts, and may be given no other numerals indicative of its position in that main class. This might easily happen if, in a given group, there were, for example, only 25 or 30 pamphlets having to do with the subject of useful arts. Pamphlets marked with one digit only will, of course, receive one band only, that corresponding to its assigned number, placed quarter of an inch above the bottom of its back.

The same general rule will obviously apply to the treatment of such pamphlets as receive numbers of two digits only.

Its Expansiveness

Note, now, the expansiveness of this color-band notation. Assume that, as pamphlets are from time to time added to the collection, those in class 6, useful arts, increase in number until there are of them so many as to make their sub-grouping advisable. The classifier now assigns them to their proper places in the several groups and sub-groups under "6" and, so doing, adds digits to the "6" in each case as needed. An assistant has now merely to add to the pamphlets in question the bands indicative of the added digits and, without erasures, corrections or added clerical labor of any kind, thereby prepares them to take their proper places on the shelves in the order and sub-order of their marks and subjects.

After the pamphlets have received their bands their proper order on the shelves is obvious and, indeed, unmistakable. They stand, first, in the numeric order of the colors of their lowest bands. Next, within this grouping, in the numeric order of their second bands, and so on. Only one who has seen a large group of pamphlets arranged by this method, can realize how inevitable it seems, even to those who have but slight knowledge of the method. The order seems not only rational to one who knows only that it is guided by a numeric sequence of colors; but also semi-automatic, in that any disorder betrays itself at a glance. A pamphlet that is not in its proper position calls attention to itself, and points even the casual observer to the place to which the color and sequence of its bands demands it should be moved.

Beyond the Decimal Point.

The process by which one or two figures after the decimal point are indicated by the color-and-position of one band is very simple.

Assume for example that the two digits given by the classifier are 33. Following the rule already noted that the numeric value of a color is always to be read first and its position next, the assistant selects the band of the numerical value of 3, which is orange and following the same rule, places it at the third position. This is 1 1-2" above the imaginary line which is 1 1-2" from the bottom of the

pamphlet. A device or tool for finding this "3" position has been prepared and will be described in a later pamphlet. For present purposes it is enough to say that this position can be found by placing the guide, Fig. 6, beside the pamphlet, and even with it at the bottom, and applying the orange or "3" band in the "3" place as marked on the guide.

If the figures for the classification which follow the decimal are 06, a lemon or "0" band will be put at the "6" place. The figures 12 will take a dark blue band in the "2" place. The figures 70 will take a check band in the "0" place. And so on.

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